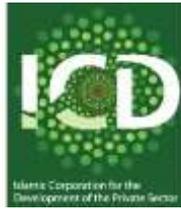


INVESTMENT OUTLOOK IN THE OIC COUNTRIES





Investment Outlook in the OIC Countries



Table of Contents

Acronyms	5
Foreword.....	7
Acknowledgements.....	9
Executive Summary.....	10
1. Introduction.....	13
PART I INVESTMENT IN THE OIC COUNTRIES	15
2. State of Investment in the OIC Countries.....	16
2.1 Public Investment	20
2.1.1 Public Investment Trends and Capital Stocks	21
2.1.2 Improving Investment Quality and Efficiency.....	23
2.1.4 Public Investment during Post-Pandemic Recovery	26
2.2 Private Investment.....	27
2.2.1 Private Investment Trends and Capital Stocks.....	28
2.2.2 Private Participation in Infrastructure Investment	31
2.2.3 Stimulating Investment for Sustainable Development.....	36
2.3 Foreign Direct Investment (FDI).....	38
2.3.1 Inward FDI Trends.....	39
2.3.2 Greenfield Investments.....	42
2.3.3 Outward FDI Trends.....	43
2.3.4 Intra-OIC FDI Trends.....	45
2.3.5 Sectoral FDI Trends	46
3. Investment Ecosystem in the OIC Countries	48
3.1 Determinant Factors of Investment	48
3.2 Entrepreneurship	49

3.3 Competitiveness	51
3.4 Country Risks	53
3.5 Cost of Financing	55
3.6 The Ease of Doing Business	56
PART II INVESTMENT PRIORITIES AND OPPORTUNITIES IN THE SELECTED SECTORS.....	59
4. Petrochemical Sector	61
4.1 Importance and Key Trends	61
4.2 Current Status	62
4.3 Key Challenges	63
4.4 Investment Opportunities	64
5. Textile and Apparel Sector.....	72
5.1 Importance and Key Trends	72
5.2 Current Status	74
5.3 Key Challenges	76
5.4 Investment Opportunities	77
6. Agriculture and Food Sector	80
6.1. Importance and Key Trends	80
6.2. Current Status	81
6.3. Key Challenges	83
6.4. Investment Opportunities	85
7. Mining and Construction Sectors.....	87
7.1. Importance and Key Trends	87
7.2. Current Status	90
7.3. Key Challenges	93
7.4 Investment Opportunities	94

PART III INVESTMENT FUNDS FOR DEVELOPMENT	102
8. Role and Importance of Investment Funds	103
8.1 Introduction	103
8.1.1 What are investment funds?	103
8.1.2 Different types of investment funds.....	103
8.2 State-owned Funds	105
8.2.1 Sovereign Wealth Fund.....	105
8.2.2 Public pension funds	108
8.3 Global Islamic Funds	110
8.3.1: Overview	110
8.3.2 Types of Islamic Funds	110
9. Impacts of Investment Funds	115
9.1 Financing and stimulating the real economy.....	115
9.2 Fostering Sustainable Growth, Green Economy and Financial Stability.....	115
9.3 Backbone of Saving and Pension Planning.....	121
PART IV CONCLUSION AND POLICY IMPLICATIONS	123
10. Conclusion	124
11. Policy Implications	126
11.1 Boosting Public Investment in OIC Countries	126
11.2 Stimulating Private Investment in OIC Countries	126
11.3 Attracting More FDI to OIC Countries.....	128
11.4 Improving Investment Ecosystem in OIC Countries.....	128
11.5 Mapping Priority Sectors for Investment in OIC Countries.....	129
11.6 Mobilizing Investment Funds in Addressing Investment Gaps in OIC Countries.....	131
Annexes	133
References	142

Acronyms

Aramco	Saudi Arabian Oil Company
AuM	Assets under Management
BOT	Build-Operate-Transfer
CAGR	Compound Annual Growth Rate
CD	Compact Disk
CO ₂	Carbon dioxide
CRC	Country Risk Classification
DVD	Digital Versatile Disc
EDBI	Ease of Doing Business Index
EMDEs	Emerging market and developing economies
EMEA	Europe, Middle East, and Africa
EPF	Employee Provident Fund
ESG	Environmental, Social and Governance
ETF	Exchange Traded Fund
FDI	Foreign Direct Investment
GCC	Gulf Cooperation Council
GCF	Green Climate Fund
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GDP	Gross Domestic Product
GEI	Global Entrepreneurship Index
GFCF	Gross Fixed Capital Formation
GNP	Gross National Product
GVC	Global Value Chains
HDPE	High-density Polyethylene
ICD	Islamic Corporation for the Development of the Private Sector
ICECS	Islamic Commission for Economic, Cultural and Social Affairs
ICMA	International Capital Market Association
ICT	Information and Communications Technology
IMF	International Monetary Fund
IsDB	Islamic Development Bank
MENA	Middle East and North Africa
MLCs	Management and Lease Contracts
MNEs	Multinational Enterprises
MW	Megawatt
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturer
OIC	Organisation of Islamic Cooperation

PA	Nylon
PE	Polyethylene
PET	Polyester
PIM	Public Investment Management
PIMAs	Public Investment Management Assessments
PPI	Private Participation in Infrastructure
PPP	Public Private Partnership
PU foams	Polyurethane foams
REIT	Real estate investment trust
SABIC	Saudi Basic Industries Corporation
SDG	Sustainable Development Goals
SESRI	Statistical, Economic and Social Research and Training Centre for Islamic Countries
SMEs	Small and Medium-sized Enterprises
SWFs	Sovereign Wealth Funds
UAE	United Arab Emirates
UN	United Nations
WEF	World Economic Forum

Foreword

Investment is a catalyst for sustainable development. Boosting investment not only stimulates economic growth but also generates jobs and triggers the development of new technologies and skills. Yet, many developing countries still suffer from limited investment, mainly due to low domestic savings and limited attraction of Foreign Direct Investment (FDI). The majority of OIC member countries are also not immune to this situation. Many of them have significant investment deficits, both in the public and private sectors, which slow down their economic growth and prevent them from reaching their full economic potential. The untapped economic potential in OIC member countries is often associated with low levels of per capita income, high incidence of poverty and unemployment, and socio-economic inequality.

In this context, it is with great pleasure that we present this joint report prepared by SESRIC and ICD of the IsDB Group, which examines the investment landscape in OIC member countries, analyses recent investment trends, and provides an overview of the investment ecosystem. The report further highlights sectoral priorities and investment opportunities in OIC member countries with a view to providing some industry-level guidance to policymakers and potential investors. In addition, the report highlights the importance of investment funds in the OIC region, which could be an important catalyst for mobilising idle savings and boosting investments.

The findings of the report reveal that OIC member countries, as a group, have managed to increase the average share of investment in their total GDP from 22.6% in 2000 to 28.6% in 2021. However, large disparities exist at the country level. Therefore, a considerable amount of additional investment is needed to fill the existing investment gaps in many OIC member countries, particularly to achieve the ambitious Sustainable Development Goals (SDGs) and the objectives of the OIC 2025 Programme of Action.

Indeed, OIC member countries abound with investment opportunities in many sectors, from petrochemicals to agriculture, which could help them raise the level of investments as these sectors offer abundant opportunities to generate income. These opportunities make many OIC member countries attractive to various types of investors. In this context, FDI could play an important role in mobilizing savings from other nations. However, attracting more FDI often requires an investor-friendly investment ecosystem. The analysed indicators on the investment ecosystem reveal that OIC member countries should make major improvements in providing a more investor-friendly environment, including reducing the associated country risks and the number of required procedures. This also applies to 'investment funds' that are seeking profitable investment opportunities around the world for their stakeholders.

Addressing key barriers to investment, diversifying investment, unleashing the potential of investment funds, and considering new investment modalities should be among the

top priorities of policy makers in OIC member countries in investment policy making. We strongly believe that the findings of this report could provide some evidence-based guidance to policy makers in this direction and offer a set of concrete ideas on how to stimulate intra-OIC cooperation in this important domain.



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Dr. Kenan Bağcı, Senior Researcher at SESRIC, prepared Chapter 2 on State of Investment in OIC countries, excluding section 2.3 on FDI, which was prepared by Dr. Cem Tintin, Senior Researcher at SESRIC. Dr. Cem Tintin prepared Chapter 3 on Investment Ecosystem.

Chapters 4, 5, 6, and 7 are prepared jointly by Dr. Musa Jega Ibrahim from IsDB and Mrs. Reham Hassan from ICD. Chapter 8 and 9 are prepared by Mrs. Nur Aina from ICD. Chapter 1, Chapter 10, and Chapter 11 are prepared jointly by Dr. Cem Tintin and Dr. Elvin Afandi.

Executive Summary

Investment is a key catalyst for economic growth and job creation. In order to promote development, OIC countries allocate a significant share of their budget to investment, corresponding to around 29% of their gross domestic product (GDP), with both public and private sector investment accounting for an increasing share of GDP over the past three decades. Yet, globally, infrastructure investment needs between 2023 and 2040 amount to about US\$72 trillion, with an estimated investment gap of US\$ 12 trillion. This underscores the importance of developing effective policies to address the investment gap and promoting intra-OIC cooperation on investment.

Part I: Investment in the OIC Countries

Notwithstanding the growth in investments, the share of OIC countries in global investments has not increased sufficiently in recent years. In 2019, OIC countries accounted for 12.2% of global public investments (up from 9.2% in 2000) and 12.5% of global capital stocks (up from 11.6% in 2000). Within the group of OIC, top five OIC countries accounted for 58.3% of total public investment during 2010-19, with Saudi Arabia ranking first with a 22.7% share of total public investments within the OIC group. Similarly, the share of OIC countries in total global private investments increased from 9.7% in 2000 to 12.3% in 2019. During 2010-19, three OIC countries collectively accounted for 55.8% of total private investments in the OIC region, namely Indonesia (27.6%), Türkiye (19.7%) and Saudi Arabia (8.5%), demonstrating a significant concentration of private investments in a few OIC countries.

The prevailing savings and technology gaps in many developing countries and OIC countries often increase the importance of multinational enterprises and FDI projects as they can enhance growth and innovation, create quality jobs, and enable sustainable development. Yet, an overview of the FDI performance of OIC countries reveals that many OIC countries are still far from their potential and can host only limited amounts of FDI. FDI inflows directed to OIC countries declined from US\$ 129.8 billion in 2013 to US\$ 114.4 billion in 2019. The outbreak of the COVID-19 pandemic has worsened the situation in the majority of OIC countries and has been associated with a reduction in FDI inflows. In 2020, FDI inflows eroded further and were measured at US\$ 100 billion in 2020, reflecting a 12.6% reduction in inflows compared to 2019. The prevalence of high-level of concentration in the OIC group is also observed in FDI: the top 10 OIC countries with the largest FDI inflows together accounted for 73% of the total FDI flows of the OIC group in 2020. Intra-OIC cooperation in the field of FDI is not close to the desired level. The limited available data underline that only a few OIC countries have benefited significantly from intra-OIC FDI.

The prevailing investment ecosystem affects both the quality and quantity of investments while also influencing to a large extent their impacts on development. Therefore, the identification of the main barriers to investment is of paramount importance in OIC countries. The analysis of selected indicators and indices developed to assess the investment ecosystem of countries in a comparative way revealed that OIC countries, on average, have a number of barriers that discourage investment. As a result, OIC countries, on average, have relatively less competitive scores, as in the Global Entrepreneurship Index (GEI) of the World Economic Forum. The findings also revealed that many OIC countries have attempted to improve their existing investment ecosystems, particularly by adopting regulatory or institutional reforms. For instance, OIC countries completed 1289 reforms across all dimensions of the World Bank's Ease of Doing Business Index (EDBI) over the period 2005-2020. Yet, the pace of reforms varies at the country level. In many OIC countries, which need relatively more comprehensive reforms, the pace and scope of reforms are not adequate. The slow pace of reforms tends to be associated with high country risks (i.e. country risk premiums) that discourage investment and increase the cost of financing as well as insurance premiums for investment.

Part II: Sectoral Priorities and Opportunities for Investment

Investment plays a crucial role as the driving force of the economy, especially because it facilitates the accumulation of public capital and promotes the attainment of scientific and technological progress through the appropriate implementation of value-added production in manufacturing activities to stimulate high economic growth.

A set of core productive activity sectors in which OIC member countries have strategic and comparative advantages have been identified as agriculture and food; textiles and apparel; mining and construction and petrochemicals. The findings highlight the importance of these sectors to the global economy and enumerate factors that give the OIC strategic and comparative advantages such as natural endowments, access to raw materials, demography, and geographical circumstances. The key findings of the sectoral analysis point out that policy reforms are needed to attract investments in these strategic sectors in OIC member countries to enhance value creation through primary and secondary processing activities to stimulate high economic growth and create numerous high-skilled jobs, with positive spill over effects in education, governance, and global industrial competitiveness.

Part III: Investment Funds for Development

As one of the most successful innovations in the global financial architecture, "investment funds" provide significant benefits for economic growth and sustainable development. These funds have become important players in the global financial markets. Their allocation decisions largely determine how efficiently an economy operates. Investment funds play a vital societal role in rebuilding the development paths of OIC countries for several reasons. Firstly, investment funds serve as intermediaries to finance and stimulate the real economy.

Their efficient aggregation and allocation of capital to productive uses enables growth and innovation, promotes productivity and efficiency in both the public and private sectors, and represents a key link in the savings-investment channel. Secondly, investment funds have the potential to support sustainable growth, particularly investment funds that integrate environmental, social and governance (ESG) factors and focus on sustainability issues can accelerate the transition to a green economy. Thirdly, in terms of financial stability, investment funds are one of the main providers of the liquidity needed for capital markets to function well. Lastly, they also serve as the backbone of savings and retirement planning at the household, community, and national levels. Given the current global context and the need for OIC countries to increase their resource mobilization efforts to fill acute investment gaps, finance sustainable development, and support resilient economic recovery after COVID-19, investment funds could serve as powerful engines of prosperity.

Part IV: Conclusion and Policy Implications

The OIC countries, as a group, were already facing serious investment gaps before the outbreak of the COVID-19. Limited savings, issues related to the investment ecosystem and idle investment funds/savings were among main reasons for this situation. Increased uncertainties due to the outbreak of the pandemic have negatively affected the decisions of some investors and have exacerbated existing investment gaps in many sectors. FDI figures in the OIC countries were also lower than the pre-pandemic potential.

The current infrastructure gaps in the OIC countries necessitate making large investments with the support of regional and international institutions, in addition to private and public sector efforts. However, it is imperative that OIC countries level the playing field and provide a better investment climate for all types of investors. The findings call for a set of policy measures and reforms to improve the investment outlook in OIC countries and stimulate all types of investments. As there are important complementarities between public, private and foreign investment in achieving economic growth, increasing private participation in public investments, such as in the form of PPPs, can bring important efficiency gains. Well-designed economic policies can also help OIC countries achieve an effective allocation of resources for various investment needs and generate synergy among different types of investors. In this context, political will can play a crucial role in attracting potential new investors and convincing the existing ones to increase their investments. Overall, strengthening public investment; stimulating private investment; attracting more FDI; improving the investment ecosystem; mapping priority sectors for investment; and mobilizing investment funds could contribute to addressing investment gaps, stimulating economic growth, and achieving sustainable development in the OIC region.

1. Introduction

The 44th Session of the Islamic Commission for Economic, Cultural and Social Affairs (ICECS), which was held on 11-13 January 2022 at the Headquarters of the OIC General Secretariat in Jeddah, requested “*SESRIC and IsDB Group to prepare an Investment Outlook Report, outlining the comparative situation of Member States, the trends in the investment ecosystem, priority sectors for investment, and the impacts of investment funds*”. Within the framework of the implementation of the said resolution, SESRIC and ICD (on behalf of the IsDB Group) jointly decided to prepare and present this *Investment Outlook Report*.

In this context, this report aims to assess and examine the investment performance and ecosystem of the Organization of Islamic Cooperation (OIC) Member Countries with a view to identifying major trends, finding out the existing challenges and providing an outlook. In the report, a broad definition of the concept of investment is adopted which covers three pillars, namely private, public and foreign direct investment. In particular, the report examines the factors that influence the decision of the investors and identifies the main obstacles that impede investment in OIC countries by providing a comparative analysis. The report further attempts to identify priority sectors for investment in OIC countries by providing a sectoral analysis based on available relevant statistics. In addition, the report analyses the impacts of investments funds in OIC countries. The report concludes with a number of policy recommendations that are expected to provide guidance and implications for policy makers in the OIC countries on ways and means to:

- a. improve the overall investment ecosystem;
- b. address investment barriers;
- c. attract more investors into priority sectors;
- d. retaining existing investors;
- e. enhance intra-OIC investment; and
- f. increase the contribution of investment funds to sustainable development.

In terms of methodology, the report draws on from a set of published reports, articles, and books as well as some secondary data sets collected from open-source databases available online such as those of UNCTAD, IMF, and World Bank. In the report, where appropriate, the performance of the OIC group is compared with the averages of non-OIC developing countries, developed countries and the world average to provide a comparative perspective.

Overall, the findings of the report reveal that OIC countries, like many other developing countries, have remarkable investment (savings) gaps and need to boost investment to fill these gaps particularly by creating a more investor-friendly environment, reducing risks, attracting foreign investors, developing PPP and/or privatization projects, identifying sectoral

investment strategies, and enhancing intra-OIC, regional and international cooperation mainly with multilateral banks and institutions. Without addressing the existing investment gaps and stimulating investments (private, public, and FDI), it is unlikely that many OIC countries will be able to achieve either the Sustainable Development Goals (SDGs) or the objectives stated in the OIC 2025: Programme of Action. In this regard, a set of policy measures coupled with key performance indicators (KPIs) should be developed on to identify the most effective ways of boosting investments by taking into account the local conditions of member countries. Relevant OIC institutions such as the IsDB Group, ICD, ICIEC, ITFC, SESRIC, ICDT, and ICCIA could all play a role in improving the capacities of OIC countries in the areas of private sector development, investment climate reforms, human capital development, and intra-OIC cooperation. If effectively used by OIC countries, a wide range of programmes and measures of these institutions could help OIC countries improve their investment prospects and ease their transition to the post-COVID-19 era as well as accelerate their pace of development.

PART I

INVESTMENT IN THE OIC COUNTRIES

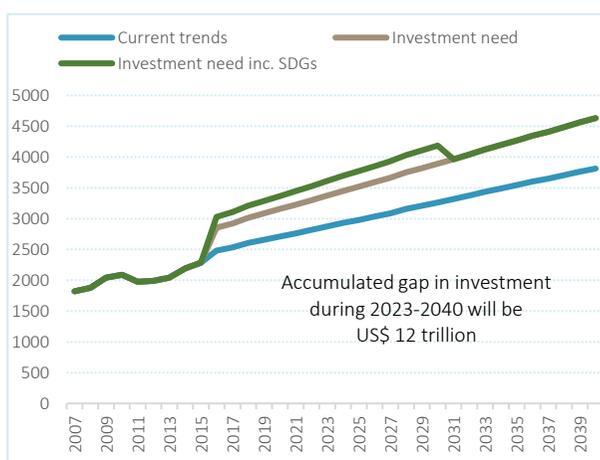


2.State of Investment in the OIC Countries

Investment is a key catalyst for economic growth and job creation. A high investment rate is a key characteristic of countries that enjoy high and sustained growth rates. In high-growth countries, total domestic and foreign investment often exceeds 25% of gross domestic product (GDP) (World Bank, 2008). On the opposite side, countries with low investment rates often face low growth rates as the productive capacity of the economy fails to increase. This results in lower rates of growth and job creation and fewer opportunities for the poor masses to break out of the poverty cycle.

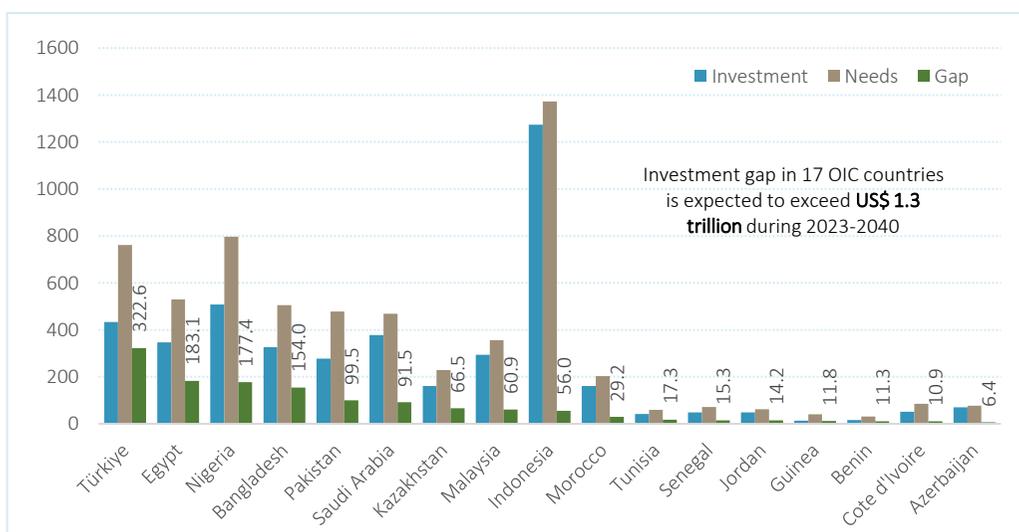
According to the Global Infrastructure Outlook, about US\$ 72 trillion is required between 2023 and 2040 in various sectors, mainly in energy, for global infrastructure investment (Figure 2.1).

Figure 2.1: Global Investment Trends, US\$ Billion (2007-2040)



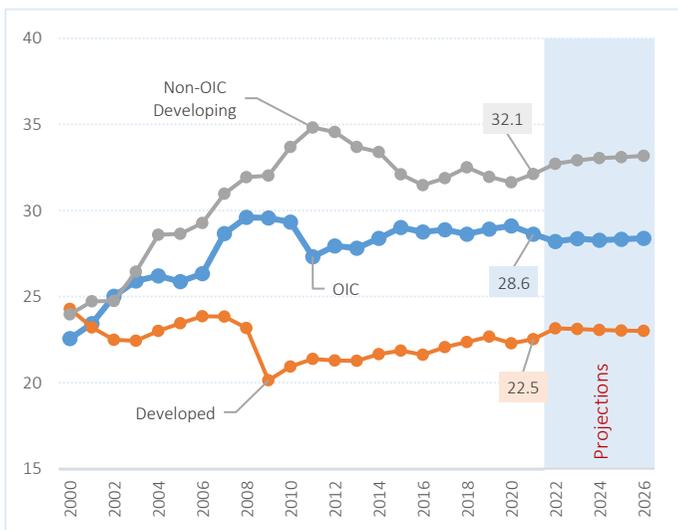
Source: Global Infrastructure Outlook database, available at <https://outlook.gihub.org/>.

Figure 2.2: Accumulated Investment Needs and Gaps in Selected OIC Countries (2023-2040)



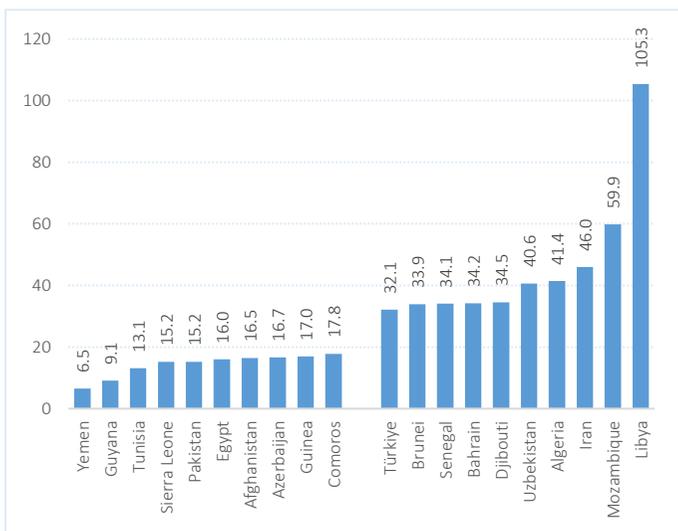
Source: Global Infrastructure Outlook database, available at <https://outlook.gihub.org/>. Countries are ranked based on investment gaps.

Figure 2.3: Total Investment, % of GDP (2000-2026)



Source: IMF WEO October 2021. 49 OIC, 38 Developed and 77 Non-OIC Developing Countries. Note: Investment or gross capital formation is measured by the total value of the gross fixed capital formation and changes in inventories and acquisitions less disposals of valuables for a unit or sector.

Figure 2.4: OIC Countries with the Highest and Lowest Share of Investment in GDP (2021)



Source: IMF WEO October 2021.

On current trends, total investment will reach US\$ 60 trillion, leading to US\$ 12 trillion gap in infrastructure investment. Among the OIC countries for which data are available, Indonesia is expected to invest the largest amount, nearly US\$ 1.3 trillion, while the largest infrastructure investment gap is expected to be observed in Türkiye (Figure 2.2). The Investment gap in six OIC countries, namely Türkiye, Egypt, Nigeria, Bangladesh, Pakistan and Saudi Arabia, will exceed US\$ 1 trillion, which corresponds to 8% of the global investment gap.

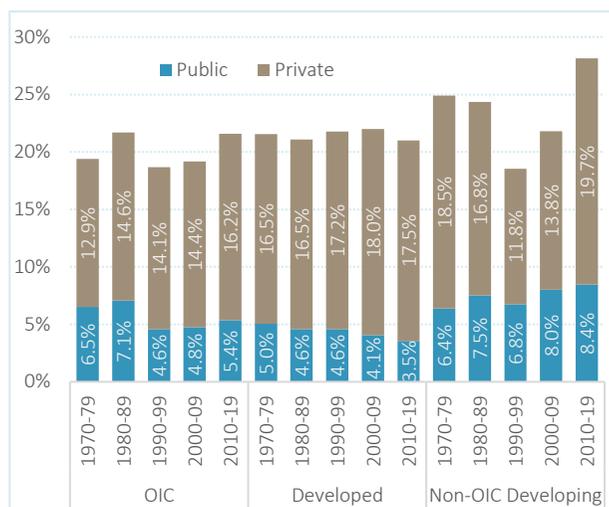
Looking at historical trends, OIC countries have allocated a significant share of their GDP to investment. During the 2000's, the share of total investment in the total GDP of OIC countries increased significantly from 22.6% to 29.3% (Figure 2.3). Over the next decade, the ratio remained stable at around

28%. By 2021, it is estimated to be 28.6%. Non-OIC countries allocated a greater share of their income to investment, which increased sharply from 24% in 2000 to 34.9% in 2011, before falling back to around 31% and stabilizing around 32%. Requiring greater investment to achieve economic development, the share of investment has remained constantly higher in OIC and non-OIC developing countries as compared to developed countries since 2001.

Yet, there are significant disparities across countries. In 2021, Yemen's share of investment was only 6.5%, but Libya's share was above 105%. Excluding these two outliers affected by political instability and armed conflict, the differences among OIC countries remain huge (Figure 2.4). Out of the 49 OIC countries for which data are available, 13 had an investment share less than 20% of their GDP. In 15 OIC countries, this share was above 30%. A higher investment share is an indicator of the importance attached to the expansion of productive capacities in a country.

The decomposition of investments by public and private actors reveals that public and private sector investments in OIC countries accounted for an increasing share of GDP over the past three decades to reach 5.4% and 16.2% in the period 2010-19, respectively. As shown in

Figure 2.5: Private and Public Investment by Decades (Share in GDP)



Source: IMF Investment and Capital Stock Database, 2021.

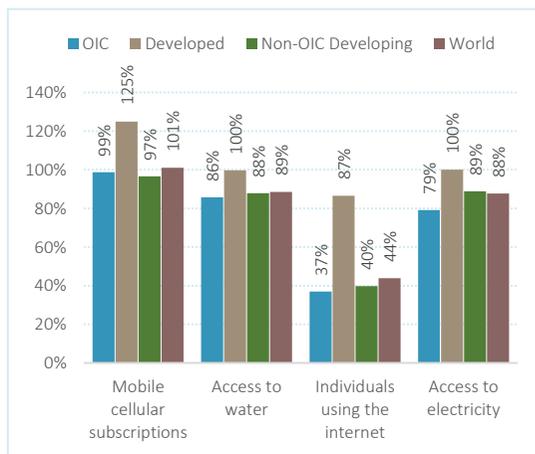
Figure 2.5, which excludes public-private partnership type of investments, the share of the public sector is steadily declining in developed countries and increasing in non-OIC developing countries. Yet, private sector investment in non-OIC developing countries also increased significantly to reach 19.7% of GDP during 2010-19.

Despite the upward trend in public investment in OIC countries, the COVID-19 pandemic has led to a reallocation of resources, as many countries have had to increase their spending to mitigate socio-economic impacts through economic and fiscal stimulus packages, thereby reducing resources for public investment. As the pandemic has also demonstrated in health and some other sectors, significant resources are required to invest in new infrastructure in developing countries and to cover the maintenance costs associated with older investments in developed countries. If the contraction in public investment continues and the infrastructure gap widens in countries with large investment requirements, this may have negative consequences on long-term growth. It is not easy to assess the existing infrastructure gaps, but it is possible to demonstrate the deficit by using some quantitative indicators.

As shown in Figure 2.6, OIC countries are around the world average in terms of mobile subscriptions (per 100 people) and access to water (% of population), but are well below the world average in terms of individuals using the internet (% of population) and access to electricity (% of population).

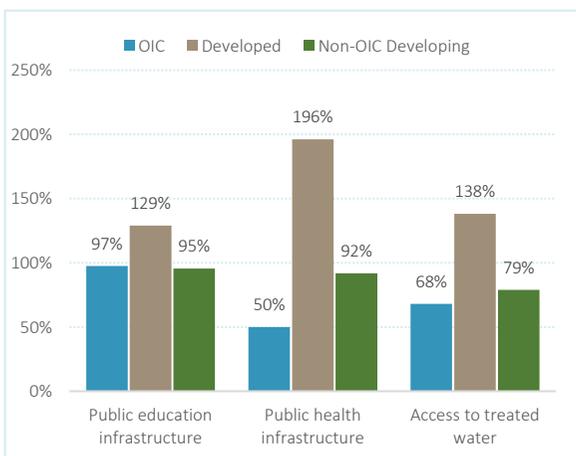
At individual country level, it would be possible to show which OIC countries are particularly suffering in certain indicators, but this would be beyond the scope of this report. Nevertheless, OIC countries need to invest more in their infrastructure to narrow the gap with the leading economies. In terms of public education infrastructure, OIC countries appear to perform close to the world average, but they only reach 50% of the world average in terms of public health infrastructure. The overall performance of OIC countries in terms of access to treated water is 32% below the world average (Figure 2.7).

Figure 2.6: Selected Indicators of Infrastructure (Per Capita)



Source: World Development Indicators, World Bank. Based on latest data available after 2015. Country coverage may vary across indicators.

Figure 2.7: Selected Indicators of Infrastructure Gap (Relative to the world average)



Source: World Development Indicators, World Bank. Based on latest data available after 2015. Country coverage may vary across indicators. Group performances are relative to the world average. Following Barhoumi et al. (2018), public education infrastructure is measured as secondary teachers per 1,000 persons; public health infrastructure as hospital beds per 1,000 persons; and access to treated water is measured as % of population.

Overall, there are significant investment gaps in the OIC countries. Investment can increase the capital stock of an economy and generate economic growth through increased production of goods and services. Public investment helps to develop efficient transport, energy and communication infrastructure, which are essential to stimulate private sector investment. Moreover, quality education and health systems contribute to building human capital, and enhancing productivity and competitiveness. Public investment serves as a catalyst for private sector

development and productivity growth, and private investment contributes to output growth and job creation by directly expanding the economy’s productive capacity. In the presence of efficient physical infrastructure and skilled labour force, foreign direct investment (FDI) can also boost productivity through the introduction of new production techniques and processes.

There are important complementarities between public, private and foreign investment in achieving economic growth. Well-designed economic policies can help countries achieve an effective allocation of resources for various investment needs and generate synergy among different types of investment. In this connection, this chapter assesses the latest state of investment in OIC countries by focusing on public, private and foreign direct investment. It examines current trends and key challenges, and explores possible policy options for improving investment efficiency and business environment.

2.1 Public Investment

Governments spend for many purposes, including education, health, social protection, defence and infrastructure, but not all of this spending can be characterized as investment. Depending on priorities, public investment may take the form of infrastructural expenditures with a special sectorial focus, such as transportation or energy, or it may be more oriented towards human capital. Governments have to take critical decisions to optimally allocate their limited resources to various spending and investment choices, as the impact of these choices on distinct groups of people and on economic activities in different sectors can substantively shape a country's growth trajectory. Aligning investment policies with growing concerns about climate change has also become essential to achieving sustainable development.

Public investment is generally defined as the capital expenditures on physical infrastructure (e.g., transportation, telecommunications, etc.) and soft infrastructure (e.g., human capital development, research and development, etc.) whose productive use extends beyond one year (OECD, 2014).¹ Capital expenditures include direct investment (i.e., gross capital formation and acquisitions, less disposals of non-financial non-produced assets) and indirect investment, or capital transfers, (i.e., investment grants and subsidies in cash or kind). Gross fixed capital formation (GFCF) is often used as the best available proxy for direct public investment.²

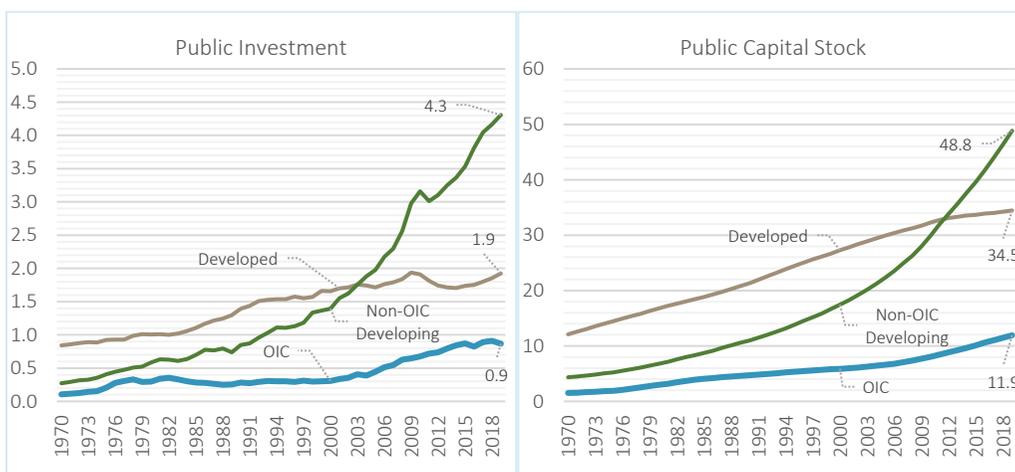
¹ Public investment usually takes the form of infrastructural expenditures with a productive life of several decades. However, government spending on education and health contributes to the accumulation of society's human capital, with prolonged benefits. Governments traditionally classify these expenses as current expenditures and therefore not a form of public investment. While governments often consider maintenance costs as a form of current outlay, these should be treated as capital outlays, since the lack of maintenance can reduce the productive life of an infrastructural asset (UNCTAD, 2009).

² GFCF is measured by the total value of acquisitions less disposals, of fixed assets during the accounting period, plus certain specified expenditures on services that add to the value of non-produced assets, such as land improvement (System of National Accounts 2008, Chapter 10, 10.32). Whenever appropriate, public GFCF is used as a proxy for public investment in this report. GFCF is a useful but narrow definition since it does not cover all public spending that could be considered investment. For example, human capital formation is usually classified as consumption, although such expenditures could have long-term impacts. See also IMF (2015 and 2019) for further discussion.

2.1.1 Public Investment Trends and Capital Stocks

Disentangling the contributions of the private and public sectors to total investment is challenging in practice. Following the IMF staff report (2015), the IMF publishes updated data on investment and capital stock using government GFCF for public investment data. It provides statistics on both the annual investment value and the cumulative capital stock. It is important to look at the public capital stock, not just the annual inflow of public investment, for two reasons. First, public investment is a key input in the creation of a network of physical assets over time, including economic infrastructure (roads, airports, electricity utilities, etc.) and social infrastructure (public schools, hospitals, prisons, etc.). In theoretical models of economic growth, the public capital stock is a direct input to the production function, contributing to an increase in productivity and living standards. Second, infrastructure assets are subject to depreciation, which requires examination of the public capital stock net of depreciation (IMF, 2015). The database allows us to track the historical trends in investment and capital accumulation for 49 OIC countries, 37 developed countries, 80 non-OIC developing countries for more than six decades.

Figure 2.8: Public Investment and Capital Stocks (Trillions US\$)

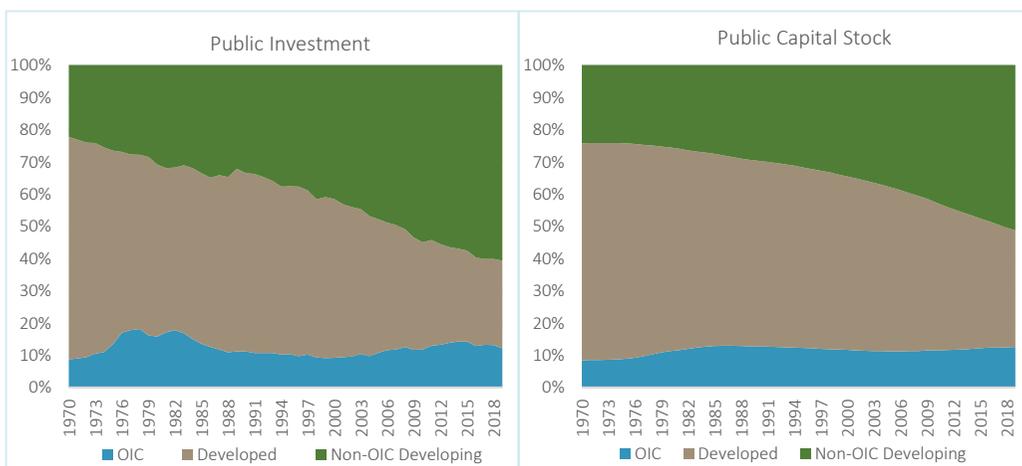


Source: IMF Investment and Capital Stock Database, 2021. General government investment (gross fixed capital formation) and capital stocks are in trillions of constant 2017 international dollars.

Figure 2.8 shows public investment (left) and capital stock (right) in OIC countries compared to developed and non-OIC developing countries. Public investment in the OIC countries remained fairly stable during the 1980s and 1990s, but started to increase during the 2000s. It exceeded the US\$ 500 billion threshold in 2006 and reached its highest level in 2018 with US\$ 911 billion. Non-OIC developing countries demonstrated a sharp increase in public investment over the past five decades, driven mainly by China. As a result, the total public capital stock increased faster in non-OIC developing countries than in other country groups. OIC countries have typically accounted for 10-15% of total global public investment, but non-OIC developing countries accounted for an increasingly greater share of global public

investment and capital stocks. Their share increased from 22% in 1970 to 61% in 2019 in total investment and from 24% in 1970 to 51% in 2019 in total capital stocks (Figure 2.9). As of 2019, OIC countries accounted 12.2% of global public investment and 12.5% of global capital stocks.

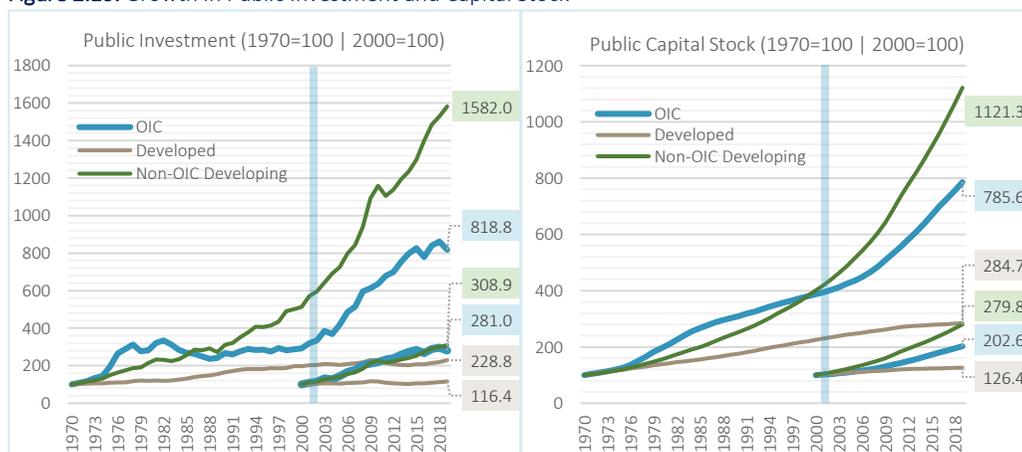
Figure 2.9: Share of OIC Countries in Total Public Investment and Capital Stocks (%)



Source: Authors' calculations based on IMF Investment and Capital Stock Database, 2021.

During the period 1970-2019, public investment in OIC countries increased by 719% and total capital stock increased by 686% (Figure 2.10). During the same period, the growth in public investment and capital stock in non-OIC developing countries was 1482% and 1021%, respectively. During the period 2000-2019, public investment increased by 181% in OIC countries, 209% in non-OIC developing countries and 16% in developed countries, whereas capital stock increased by 103% in OIC countries, 180% in non-OIC developing countries and 26% in developed countries.

Figure 2.10: Growth in Public Investment and Capital Stock

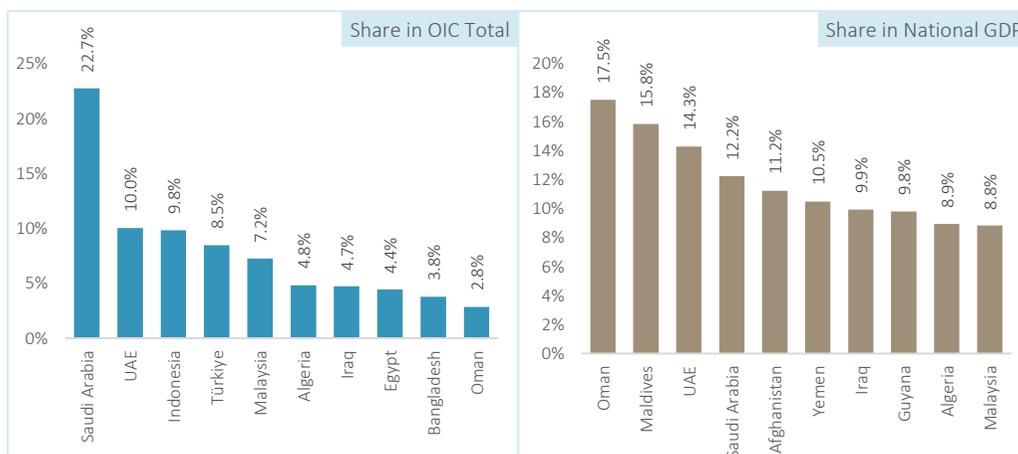


Source: IMF Investment and Capital Stock Database, 2021. General government investment is indexed to 100 in 1970 and in 2000.

Source: IMF Investment and Capital Stock Database, 2021. General government capital stock is indexed to 100 in 1970 and in 2000.

There is clearly a growth in public investment in OIC countries, but the growth rate is lower than the average of non-OIC developing countries. Their share in global investment and capital stocks is not increasing significantly. Within the OIC group, top five OIC countries accounted for 58.3% of all public investment during 2010-19, with Saudi Arabia leading with a 22.7% share of total public investment within the OIC group (Figure 2.11, left). In terms of the share of public investment in national GDP, the highest share was observed in Oman (17.5%), followed by Maldives and United Arab Emirates (Figure 2.11, right).

Figure 2.11: Top OIC Countries in Public Investment, 2010-19



Source: IMF Investment and Capital Stock Database, 2021.

2.1.2 Improving Investment Quality and Efficiency

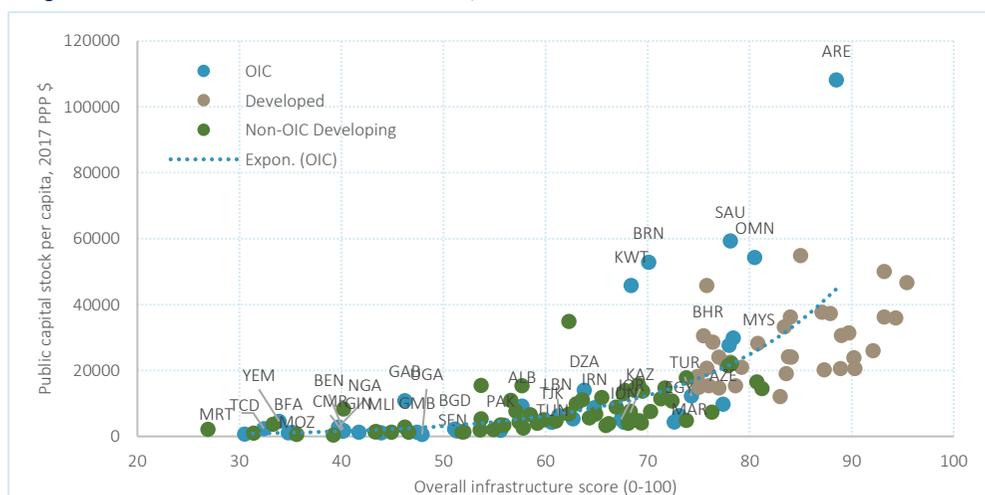
As governments strive to meet public investment goals within tight budget constraints, public investment management plays a critical role in improving the efficiency and effectiveness of public investments. Weaknesses in the planning, management and monitoring of investments can undermine the positive impacts that investments can have on growth. A recent IMF book on infrastructure governance (Schwartz et al., 2020) confirms that, on average, countries lose more than one-third of the resources spent on public investment due to inefficiency. Therefore, the impact of public investments depends to a large extent on how governments manage them.

As shown in Figure 2.12, countries with a higher public capital stock per capita appear to have a better quality of infrastructure. There are also a significant number of OIC countries that are located at a low public capital stock per capita and low infrastructure score, which demonstrates the need to improve the quantity as well as the efficiency of public investment.

In an attempt to evaluate the efficiency of public investments, the IMF launched the Public Investment Management Assessment (PIMA), which evaluates infrastructure governance using 15 key institutional features across the stages of the public investment cycle. They assess public investment management (PIM) institutions in terms of design, effectiveness, and reform priorities. More than 30 PIMAs have been conducted mainly in emerging markets and low-income developing countries. They provide a standard framework to assess the strengths

and weaknesses of infrastructure governance, allowing for cross-country comparisons, and country-specific recommendations.

Figure 2.12: Real Public Investment and Quality of Overall Infrastructure

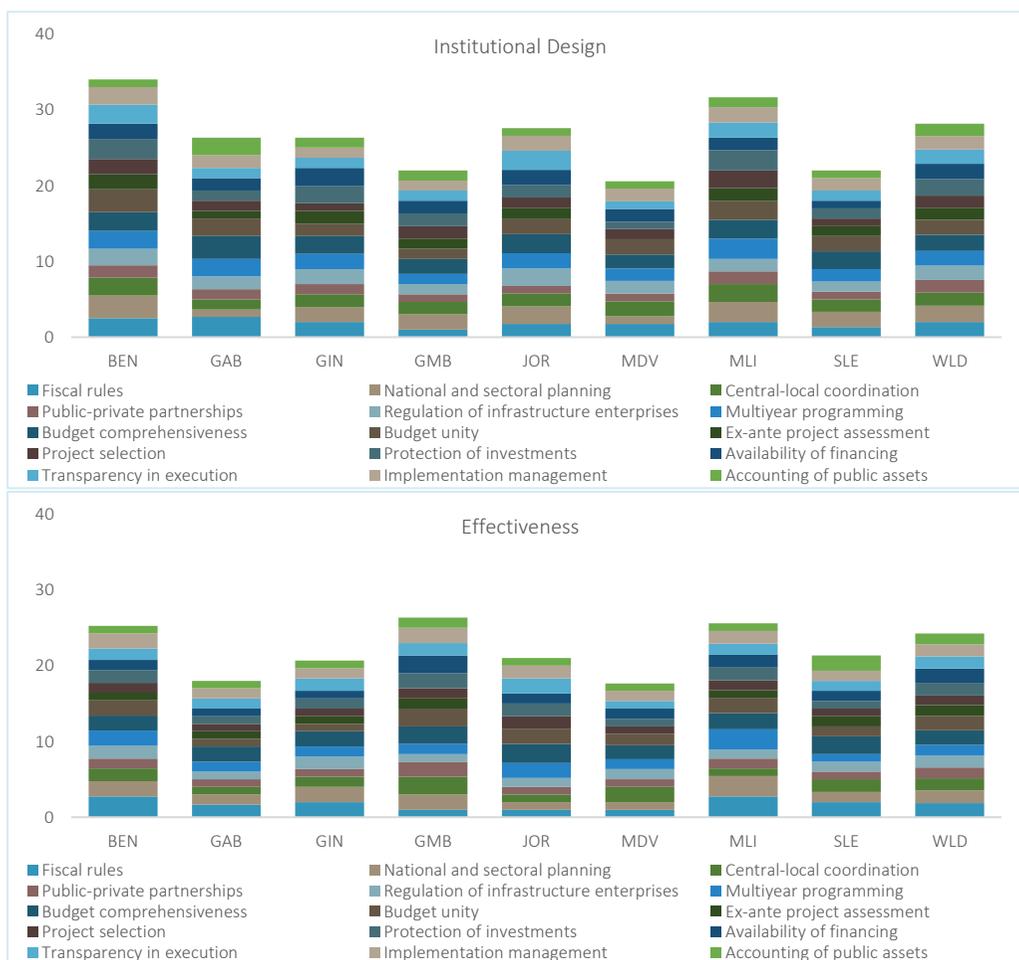


Source: IMF Investment and Capital Stock Database 2021 and WEF Global Competitiveness Report 2019.

Figure 2.13 shows the performance of eight OIC countries for which PIMAs have been conducted. Based on a scoring system ranging from 0 to 10, with 10 indicating full alignment with good PIM practices, Benin and Mali score above the world average (which covers mostly developing countries) in terms of design and effectiveness, while The Gambia scores better than the world average in terms of effectiveness. Though Benin has one of the highest scores, the PIMA assessment reveals that project selection and ex-ante and ex-post assessments are not carried out systematically, which results in low-quality projects (IMF, 2020a). GFCF is extremely erratic in Mali and has been on a downward trend in the long term. This poor performance derives from a substantial efficiency gap: in Mali, only 57% of capital expenditure materializes as fixed capital stock, compared to an average of 73% in the rest of the world (IMF, 2018b). In Gabon, the findings of the PIMA assessment reveal structural deficiencies in planning procedures and institutional arrangements, where strategic and operational roles get not clearly defined. In the absence of well-coordinated planning, the allocation of resources for investment outlays in the program-budget becomes incomplete and subjective (IMF, 2020b).

Overall, compared to a maximum score of 10, even the best performing OIC countries have much room for improving the design and effectiveness of their PIM institutions. PIMAs show that countries are better at designing PIM institutions than at implementing them effectively. Weaknesses in PIM institutions are prevalent throughout the public investment cycle, but are more prominent in the implementation stage (IMF, 2018a). Across all PIMAs, institutions are better designed in the planning stage, compared to institutions in the allocation and implementation stages.

Figure 2.13: Public Investment Efficiency in Selected OIC Countries



Source: Compiled from various "Public Investment Management Assessment" reports prepared by IMF staff.

2.1.3 Role of Sovereign Wealth Funds

Countries with large windfalls have a unique opportunity to accelerate growth and promote diversification through efficient public investment. Public investment can play a prominent role in boosting growth and long-term development prospects, but the extent to which public investment contributes to this goal depends on its efficiency. Indonesia and Malaysia have used oil revenues to finance investment and made a “big push” in industrial development (Albino-War et al., 2014). High investment spending can contribute to weakening fiscal positions, exacerbating fiscal vulnerability to sudden declines in commodity prices and deteriorating the fiscal position, which can be avoided by improving efficiency in public investment. This is particularly the case for countries with short windfall horizons, such as Bahrain, Azerbaijan and Oman, which still have less than a generation before their natural resources are depleted (Albino-War et al., 2014).

Resource-rich countries commonly establish sovereign wealth funds (SWFs) to manage national savings for investment purposes. According to the statistics by the Sovereign Wealth Fund Institute, as of April 2022, the total value of the funds managed by SWFs worldwide was US\$ 9.87 trillion. By possessing almost 40% of the world's total funds, OIC countries have a unique opportunity to bridge the investment gap and foster economic diversification.³

SWFs have long-term objectives, including intergenerational wealth transfer. They have traditionally invested in external securities for a number of reasons, including the lack of domestic investment opportunities. Effective use of SWFs for domestic investment requires ensuring that the funds are utilized within the context of the general public investment plan and that there is a sustainable flow of funds for investment to ensure that they do not become destructive due to large fluctuations in the flow of funds to the national economy. It is also essential to ensure that SWF resources are not used to finance public expenditure beyond budgetary controls and that they are directed to productive investment opportunities (Gelb et al., 2014).

2.1.4 Public Investment during Post-Pandemic Recovery

During the COVID-19 pandemic, financing constraints and competing spending priorities to save lives and livelihoods caused many countries to put domestically financed investment projects on hold. In the aftermath of the crisis, these countries will want to use fiscal policies to revive the economy and stimulate aggregate demand through public investment, but they will emerge from the pandemic with limited fiscal space, high debt levels and large financing needs. According to the IMF (2020c), governments need to scale up public investment to ensure successful reopening, stimulate growth and employment, and green their economies. Some countries with strong fiscal positions have already allocated resources for measures beyond the immediate emergency response. However, countries with a weaker fiscal positions may find it difficult to mobilize resources for a significant stimulus in public investment.

In many low income and emerging market economies, even those with fiscal space and access to finance, the ability to rapidly scale-up investment projects may be limited following the pandemic. Infrastructure development priorities may have changed, skilled labour may be in short supply, or access to materials and equipment may be insufficient due to supply chain disruptions. Countries must therefore reassess investment priorities in light of post-pandemic realities. Project choices should prioritize investments that reduce the likelihood or impact of future crises, including pandemics and climate change, and that promote digitalization.

In considering how to boost infrastructure investment to support the recovery, the IMF (2020d) and IMF (2021c) suggest the following measures:

³ A detailed discussion on SWF of OIC countries is presented in Chapter 8.2.1.

- The public investment plan should be revisited, and possible changes made to the prioritization and phasing of projects, accelerating some and deferring or cancelling others.
- Projects should be properly evaluated before being selected, and regulatory approvals could be streamlined.
- Provisions should include clear criteria for project selection
- The fiscal stimulus program should be anchored in a credible and realistic medium-term fiscal policy and framework.
- Capacity constraints should be identified and addressed at an early stage.
- Capital maintenance projects should play an important role in the investment program.
- Proper management for PPP projects will be even more relevant in the aftermath of COVID-19.
- Procurement mechanisms should be reviewed to ensure timely and effective implementation of the selected investment projects, while maintaining transparency.
- Strong project management is needed to ensure that projects are implemented on time and within budget and that they yield the expected benefits.
- Effective mechanisms for project monitoring and reporting to ensure the successful implementation of the entire project portfolio as part of the post-crisis recovery program.

While accelerating investments, countries will need effective institutions and considerable technical expertise to compare projects and provide realistic assessments of costs and economic returns. Poor project selection and management can lead to longer-term costs with excessive maintenance requirements. For many countries, deteriorating debt dynamics and tighter financing conditions are likely to continue to constrain investment, especially in economies with high foreign currency-denominated external debt (IMF, 2020c). However, public investment is expected to play an important role in fiscal packages allocated to recovery, to promote job creation and increase productivity, to make progress toward the SDGs, and build resilience to future crises.

2.2 Private Investment

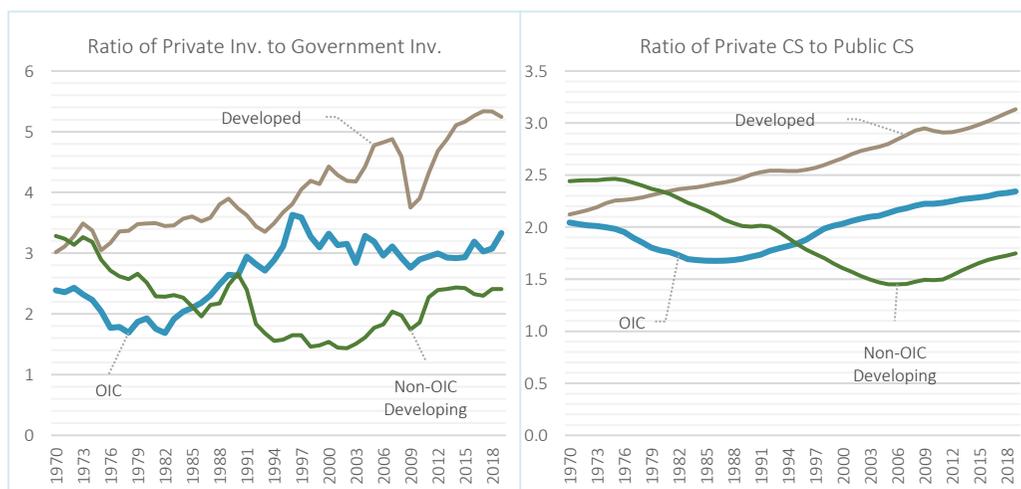
As highlighted earlier, infrastructure investments need to be substantially increased in most OIC countries to meet social needs and support faster economic growth. The public sector can take the lead in making large-scale investments to transform the economies, but there are often significant constraints and inefficiencies in public investments. Therefore, the dynamism of the private sector must be used to improve the outcomes of investment projects. Private investment helps create new jobs, increase employment, reduce poverty, improve welfare, enhance productivity and competitiveness, and encourage foreign investment by signalling a healthy economic outlook. It can thus contribute significantly to the growth and development of an economy.

In many cases, private sector participants also face significant challenges when undertaking major investment projects. These challenges can arise from regulations, enabling conditions, or coordination issues among the relevant stakeholders. When making investment decisions, the private sector carefully considers and evaluates many conditions and criteria involved. First and foremost, they seek stable macroeconomic conditions to launch any investment plan and a reliable market to offer their goods and services. Policy issues for encouraging private investment go beyond these considerations to create a more investor-friendly environment. Given the size of the market and assuming stable macroeconomic conditions, policymakers should provide a well-regulated and well-functioning business environment to attract private sector investment. Important policy issues include investment regulation, trade policy, competition policy, tax policy, human resource development, and investment financing (see SESRIC, 2015 for a detailed discussion).

2.2.1 Private Investment Trends and Capital Stocks

Private investment has significantly outpaced public investment worldwide. It has played a particularly crucial role in developed countries, where private investment is more than five times higher than public investment (Figure 2.14, left). In OIC countries, the ratio of private investment to capital investment surged during the 1980s and stabilized at around 3 during the 2000s and 2010s. As of 2019, private investment in OIC countries is 3.3 times higher than public investment. In non-OIC developing countries, this ratio declined for most years between 1970 and 2002, but since 2003 an upward trend is observed to reach 2.4 in 2019. Similarly, the private capital stock has followed a similar trend, where it is 3.1 times higher in developed countries, 2.3 times higher in OIC countries, and 1.8 times higher in non-OIC developing countries (Figure 2.14, right)

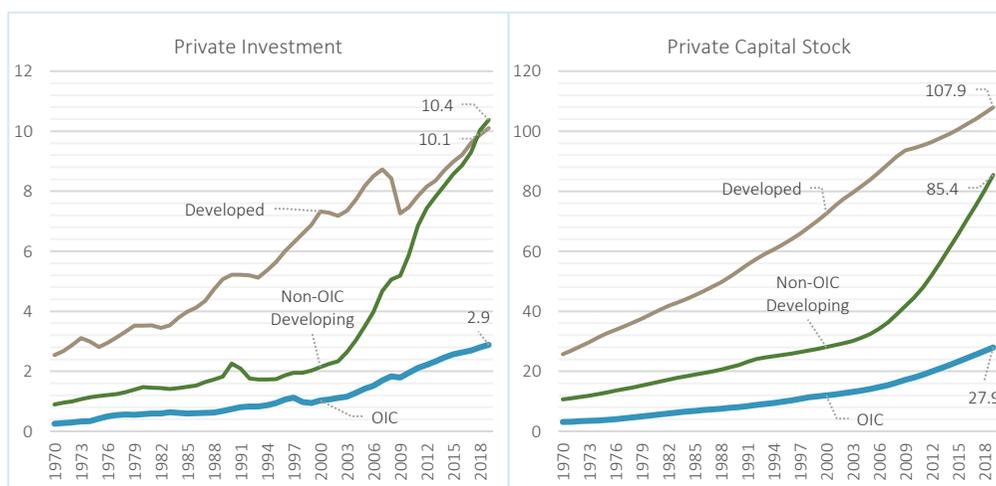
Figure 2.14: Ratio of Private and Public Investment and Capital Stocks



Source: IMF Investment and Capital Stock Database, 2021. General government and private capital stock (constructed based on private investment flows) are in billions of constant 2017 international dollars. CS: Capital Stock.

Until 2000, the difference in private investment between OIC and non-OIC developing countries was fairly stable, but private investment in non-OIC developing countries, driven mainly by China and India, surged rapidly from around US\$ 2.1 trillion in 2000 to US\$ 10.4 trillion in 2019. During this period, private investment growth was more moderate, rising from US\$ 1 trillion in 2002 to US\$ 2.9 trillion in 2019 (Figure 2.15, left). Private investment in developed countries remained robust, with the exception of a significant drop during 2008-09 financial crisis. Accordingly, the private capital stock has grown strongly over the last five decades to reach US\$ 108 trillion in 2019. Capital stock growth was rather weak in OIC countries, reaching only US\$ 27.8 trillion as of 2019 (Figure 2.15, right).

Figure 2.15: Private Investment and Capital Stocks (Trillions US\$)



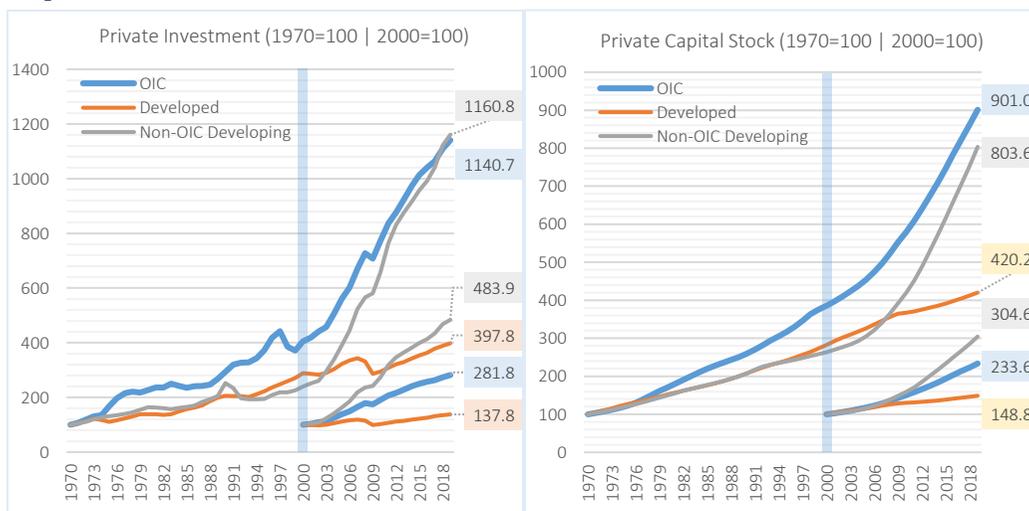
Source: IMF Investment and Capital Stock Database, 2021. Private investment and capital stock (constructed based on private investment flows) are in billions of constant 2017 international dollars.

Even though the total size of private investment remained small in OIC countries, it increased by more than 10 times in OIC countries between 1970 and 2019, slightly lower than in non-OIC developing countries. Looking at the performance of country groups over the last two decades alone, private investment growth was 182% in OIC countries, 298% in non-OIC developing countries and 38% in developed countries (Figure 2.16, left). In terms of private capital stock, growth was highest in OIC countries during the period 1970-2019, where it increased eightfold in OIC countries, sevenfold in non-OIC developing countries and 3.2 fold in developed countries (Figure 2.16, right).

Accordingly, the share of the OIC countries in the total global private investment increased from 6.9% in 1970 to 9.7% in 2000 and 12.3% in 2019 (Figure 2.17, left). Their share in total capital stock increased from 7.9% in 1970 to 10.6% in 2000 and 12.6% in 2019 (Figure 2.17, right). Despite improvements in private investment and capital stock, current levels remain well below their potential.

At the individual country level, the OIC countries with the highest private investments are presented in Figure 2.18. During 2010-19, Indonesia accounted for 27.6% of the total private

Figure 2.16: Growth in Private Investment and Capital Stock

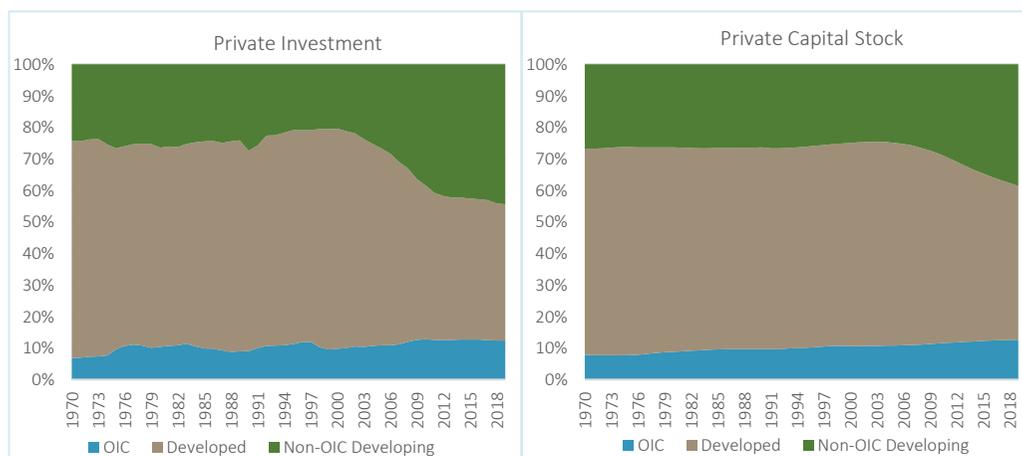


Source: IMF Investment and Capital Stock Database, 2021. Private investment and capital stock are indexed to 100 in 1970 and in 2000.

investment in OIC countries, followed by Türkiye (19.7%) and Saudi Arabia (8.5%). As for the share of private investment in national GDP, Indonesia again demonstrated the highest level with 27.2% during the same period, followed by Brunei Darussalam (24.9%) and Türkiye (24.7%).

During 2010-19, the combined share of private and capital investment in national GDP is over 30% in five OIC countries, namely Maldives (37.1%), Yemen (35.1%), Indonesia (30.3%), Oman (30.1%) and Brunei Darussalam (30.0%). On the other hand, this share is below 10% in six OIC countries, namely Pakistan (9.6%), Nigeria (9.0%), Gambia (8.7%), Sierra Leone (7.9%), Egypt (7.6%) and Guinea-Bissau (3.2%).

Figure 2.17: Share of OIC Countries in Total Private Investment and Capital Stocks (%)



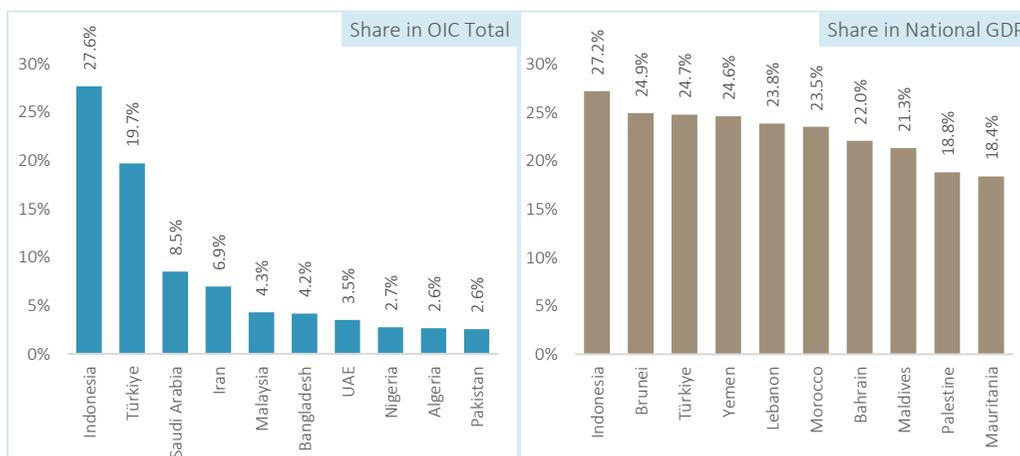
Source: Authors' calculations based on IMF Investment and Capital Stock Database, 2021.

2.2.2 Private Participation in Infrastructure Investment

A well-functioning and efficient infrastructure plays a key role in economic development. It increases living standards, attracts more businesses, and supports the production process of agricultural and manufactured goods by reducing costs. It also contributes to economic integration and facilitates trade by making it easier to access goods and services. Better transportation and communication links allow countries to access international markets more easily. Infrastructure projects also have a stimulating effect on the economy by increasing employment and creating a demand for intermediary materials. By meeting this demand, attempts to develop skills of workforce or increase domestic capacity to produce intermediary materials can generate additional gains for the economy in the long run.

Despite these existing advantages, infrastructure development faces major challenges, including lack of government resources, inefficient state-owned enterprises, unskilled labour and low technology. To address these challenges, private companies are increasingly given the opportunity to participate in infrastructure projects in different sectors through different types of contracts. Private participation does not necessarily require a partnership with the public sector. When governments open the market to private investment, investors can decide whether or not to invest in certain sectors based on their assessment of project’s profitability. Public Private Partnerships (PPPs) involve collaboration between the public and private sectors to fulfil a long-term goal, usually for a social and economic infrastructure project that will lead to the development of an area or region. In practice, such partnership agreements are mainly used to finance the construction and operation of hospitals, schools, roads, railways and airports.

Figure 2.18: Top OIC Countries in Private Investment, 2010-19



Source: IMF Investment and Capital Stock Database, 2021.

PPPs can be attractive to both the government and the private sector. For the government, private financing can support increased infrastructure investment without immediately adding to government borrowing and debt, and can be a source of government revenue. At the same time, better management in the private sector and its capacity to innovate can lead

to greater efficiency and deliver better and cheaper services. For the private sector, PPPs offer business opportunities in areas from which it was often previously excluded, as well as an expansion of products and services beyond their current capabilities (IMF, 2004). PPPs, therefore, enable the public sector to benefit from the entrepreneurial dynamism, expanded financing opportunities in an environment of budgetary constraints, and innovative and efficient management styles of the private sector, which adds to its capital, skills and experience.

There are four broad types of PPP modalities: management contracts, leasing contracts, concessions, and build-operate-transfer schemes and their many variants. Table 2.1 illustrates how these different forms of project delivery vary in terms of asset ownership, risk transfer, contract duration, and the sharing of responsibilities between public and private parties. There are many other variations of PPP agreements including, but not limited to, build-own-operate, build-develop-operate, design-build-finance-operate, build-own-operate-transfer, where the private sector designs, builds, owns, develops, operates, manages, purchases, leases, renovates and/or upgrades an asset in accordance with agreements with the public sector. Public-private partnerships are broad in scope and can be an important tool in leveraging private investment. However, for the sake of brevity, the analyses in remainder of this subsection will be limited to private participation in infrastructure investments.

Table 2.1: Forms of PPP Delivery: Differences in Asset Ownership, Risks, and Contract Duration

Contract type and duration	Asset ownership	Capital investment	Commercial risk	Responsibility for O&M	Service and payment to private provider
Service contract (1-3 years)	Public	Public	Public	Public & Private	Definitive fee paid for technical service by government to private provider
Management contract (3-8 years)	Public	Public	Public	Private	Private sector manages the operation of government services and receives direct royalties from the government
Lease contract (5-10 years)	Public	Public	Private	Private	Private sector manages, operates and/or maintains a public service to specific standards; user fees are charged and rent is paid to the government for the use of facilities
Concessions and PPPs (BOTs, BOOs etc.) (10-30 years)	Public & Private	Private	Private	Private	Private sector manages, operates, maintains and/or invests in infrastructure based on specific outputs and standards; fees are charged to users; it may also pay concession fees to the government

Source: OECD (2015b).

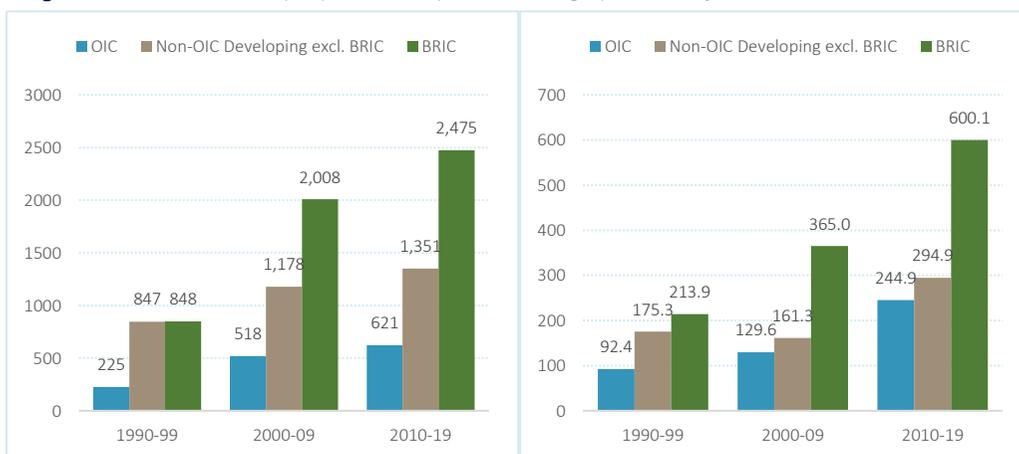
The World Bank's Private Participation in Infrastructure (PPI) Database provides information on private sector participation in infrastructure investments for 126 developing countries, 47 of which are OIC member countries. This subsection analyses the trend of private participation in infrastructure in 47 OIC countries⁴ over the last 30 years (between 1990 and

⁴ Data are not available for the following OIC countries: Bahrain, Brunei, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Suriname, Turkmenistan and United Arab Emirates. The database also does not cover developed countries.

2019) and compares the figures in OIC countries with those of non-OIC developing countries to make assessments on total investments and types of operations. It should be noted, however, that the average performance of non-OIC developing countries is heavily influenced by four major emerging economies, namely Brazil, Russia, India, and China (BRIC countries). High infrastructure investment in these countries induces marked differences in the amount of private participation in infrastructure and the number of projects. For that reason, the average performance of the OIC countries is compared with that of the non-OIC developing countries excluding BRIC and the BRIC countries separately.

The most up-to-date version of the data (accessed in April 2022) includes 10,421 projects, but our analysis excludes projects that were initiated but cancelled. Out of remaining 10,071 projects between 1990 and 2019, 9,583 are still active (i.e., under construction or operational), 226 are completed (the contract period has expired) and 262 are distressed (under contract termination or arbitration). The three most common types of PPPs are build-operate-transfer (2,649), build-own-operate (2,245) and build-rehabilitate-operate-transfer (1,930). Data are provided in five major economic sectors: information and communication technology (ICT), energy, transport, water and sewage, and municipal solid waste, with the last two sectors combined in our assessments as “water, sewage and waste” (WSW).

Figure 2.19: Total Number (left) and Value (US\$ Billion, right) of PPI Projects



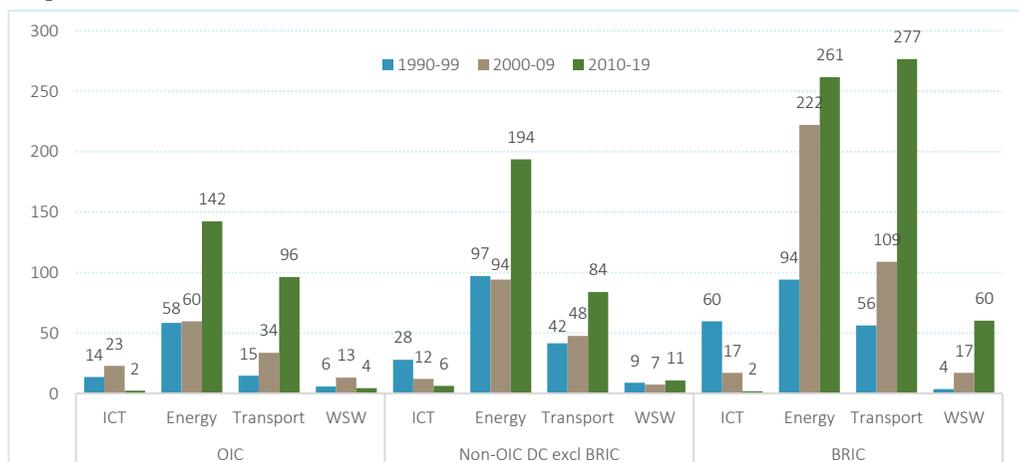
Source: World Bank PPI Database, 2022.

Figure 2.19 shows the total number (left) and value (right) of private infrastructure investments in OIC countries compared to non-OIC developing countries over the period 1990-2019. The total number of PPI projects increased at higher rates in OIC countries than in non-OIC developing countries excluding BRIC countries over the past three decades. During the period 2010-19, a total of 621 projects were launched in the OIC countries with a total investment value of US\$ 245 billion. During the same period, 2,475 projects launched by BRIC countries had a total investment value of US\$ 600 billion, reflecting a higher investment per project in OIC countries.

Disaggregated by sector, Figure 2.20 shows that energy infrastructure projects attract more investment in OIC countries. Energy projects cover the generation, transmission, and

distribution of natural gas and electricity. Between 2010 and 2019, 475 private participations in energy infrastructure projects reached contractual or financial closing in OIC countries, comprising investment commitments of US\$ 142 billion. The energy sector accounted for 58.1% of total private investments in OIC countries during this period, while this share was 65.7% in non-OIC developing countries, excluding BRIC and 43.6% in BRIC countries.

Figure 2.20: Total Value of PPI Projects by Sector (US\$ Billion)



Source: World Bank PPI Database, 2022. ICT: Information and communication technologies; WSW: Water, sewage and municipal solid waste.

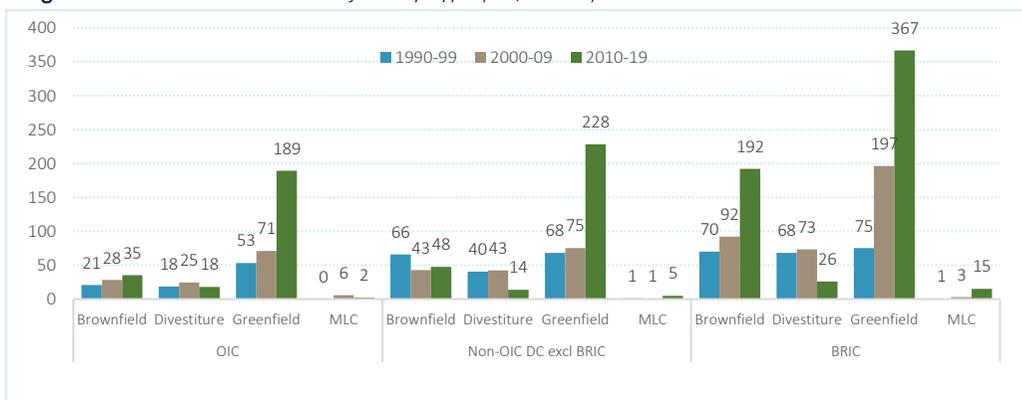
Transport infrastructure consists of airport runways and terminals, railways, toll roads, bridges, highways, tunnels, port infrastructure, terminals, superstructures and canals. It plays a significant role in economic development by improving the freight industry and the transfer of agricultural products, manufactured goods, raw and intermediary materials. During the period of 2010-2019, 76 private transport infrastructure projects were implemented in OIC countries, involving investment commitments of US\$ 96.2 billion and accounting for 39.3% of total investments.

WSW infrastructure is not only a substantial element in determining the realization of agricultural and manufacturing activities, but it is also essential in providing decent living standards for human and economic development. During the period 2010-2019, 49 projects reached contractual or financial closure in the OIC countries, comprising investment commitments of US\$ 10.8 billion. In OIC countries as well as in other country groups, investments in ICT projects fell significantly over time, receiving only US\$ 2.2 billion in investments between 2010 and 2019.

These infrastructure investments can also be classified under four types of contracts, namely Brownfield, Greenfield, Divestiture, and Management and Lease Contracts (MLCs). MLCs entrust the operation and management of a state-owned facility to a private entity, with the state remaining the decision maker. Greenfield projects take place when a private entity or public-private joint venture builds a new project and operates it for a specified period. Brownfield projects are similar to Greenfield projects, except that instead of building a new asset, the private entity takes over an existing asset and typically improves (rehabilitation) or

expands it. Divestitures, on the other hand, are privatization projects, they occur when private companies buy shares of a state owned enterprise.

Figure 2.21: Total Value of PPI Projects by Type (US\$ Billion)

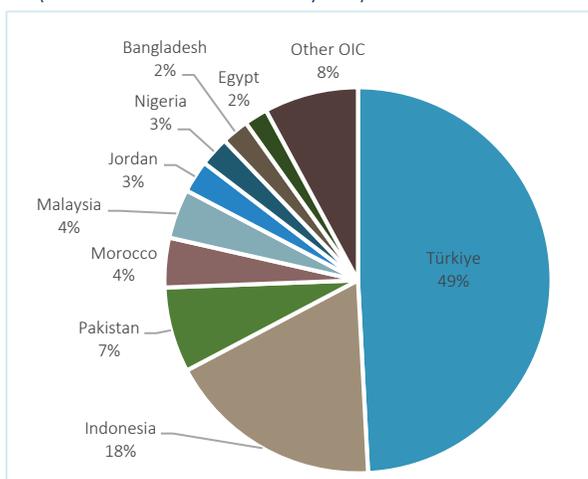


Source: World Bank PPI Database, 2022. MLC: Management and lease contract.

More than three-quarters of all investments (77.3%) in OIC countries were in Greenfield projects with investment commitments of US\$ 189 billion during 2010-19, meaning that most of the projects launched recently, without prior infrastructure to build on (Figure 2.21). With the rise of economic decent ralization and privatisation policies, Brownfield projects were the second most common type of operation in private participation, with investments of US\$ 35 billion, or 14.5% of total investments in OIC countries. In non-OIC developing countries, Greenfield investments also accounted for the bulk of investments with a share over 55%.

Overall, 1,364 privately funded infrastructure projects took place in 47 OIC countries, worth US\$ 467 billion between 1990 and 2019. However, four BRIC countries outperform OIC

Figure 2.22: Top OIC Countries in PPI Projects during 2010-19 (Share in Total Investment by OIC)



Source: World Bank Private Participation in Infrastructure (PPI) Database, 2022.

countries in terms of value and number of projects in all sectors and they again outperform other non-OIC developing countries. Among the 47 countries, Türkiye accounted almost half of all PPI projects within the OIC group between 2010 and 2019, followed by Indonesia and Pakistan. They collectively accounted for 74.4% of all private investment in infrastructure projects (Figure 2.22). This indicates that many OIC countries do not provide sufficient space for the private sector to participate in infrastructure investments.

Although there are many opportunities for infrastructure investment in OIC countries, investors are not taking full advantage of them – often due to gaps in the enabling environment for such investments.⁵ A review of country experiences by the OECD (2015b) reveals that increasing private participation in infrastructure investments requires an investment regime that provides clarity and predictability for investors, in particular protection against expropriation and provisions for dispute resolution and contract negotiation. There are a variety of other challenges, from project preparation to finance and governance. Identifying and analysing country-specific challenges would help develop tailored responses to overcome such challenges and improve the participation of private sector in infrastructure investments.

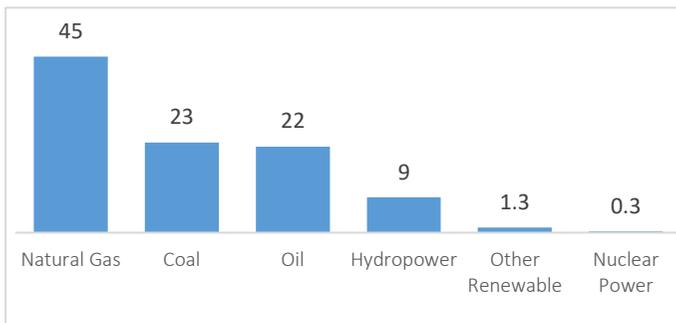
Entrepreneurial dynamism is another key factor in promoting private investment. Entrepreneurs create a positive externality by bringing new goods and new technology to the market. However, entrepreneurial activity in OIC countries is lagging behind global averages and there are important constraints in promoting entrepreneurial activity. As demonstrated in SESRIC (2017) based on World Bank data, OIC countries have the lowest density of new business entry, corresponding to only 13% of the density in non-OIC developing countries. Entrepreneurs require an enabling environment to materialize their innovative ideas and take advantage of emerging business opportunities in order to contribute to overall socio-economic well-being. On the other hand, improving the investment climate is not enough if entrepreneurs are not innovative. Besides creating an enabling environment, improving the innovation and entrepreneurship capacities of private sector actors is important for a vibrant and productivity-enhancing private sector.

2.2.3 Stimulating Investment for Sustainable Development

Rates of environmental degradation are unsustainable for the long-term functioning of the global economy. Current and future investments must be ‘greened’ to avoid risky levels of climate change and adverse environmental impacts. Special attention should be paid to fostering investment in renewable energy generation, energy efficiency, sustainable transport, agriculture, forestry and land-use, waste and wastewater. Increased investment in clean energy infrastructure facilitates cost-effective access to energy, reduces pollution and associated health costs, reduces dependence on fossil-fuels, fosters innovation, and creates new jobs (SESRIC, 2015). Moreover, the International Energy Agency estimates that every additional dollar invested today in clean energy can generate three dollars in future fuel savings by 2050 (OECD, 2015a).

⁵ See chapter 3 for a detailed discussion on the investment ecosystem.

Figure 2.23: Sources of Net Electricity Production (% , 2015)



Source: World Bank, World Development Indicators. Notes: OIC: N = 41.

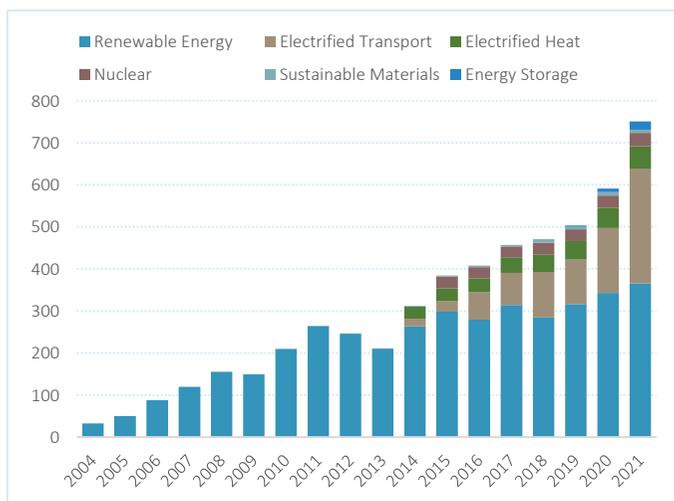
Unfortunately, as shown in Figure 2.23, despite developments in bioenergy, solar and wind technologies, the role of non-hydro renewables in net electricity production in 41 OIC countries remains marginal, at 1.3% in 2015, according to World Bank statistics for the latest year of available data. Morocco (8.2%), Türkiye (6.3%) and

Togo (6.2%) were the OIC countries with the highest share of electricity generation from renewable energy sources in 2015. The situation is similar with nuclear power that symbolically accounts for 0.3% of the combined net electricity production in a given sample of OIC countries.

Promoting green investment requires specific strategies and policies beyond those aimed at attracting investment in general. Green investment is closely related to other investment approaches such as socially responsible investment (SRI) and long-term sustainable investment. It requires the creation of a supportive policy framework and targeted investment promotion methods. One of the key challenges for governments in channelling investment into clean energy projects is the lack of design and implementation of clear and predictable national policy frameworks (OECD, 2015b).

Figure 2.24 shows new global investments in the energy transition over the period 2004-2021. While investment in renewable energy continues to grow, a surge in investment is observed in electrified transport. By 2021, total investment reached US\$ 366 billion in renewable energy and US\$ 273 billion in electrified transport. The energy

Figure 2.24: Investment in Energy Transition (US\$ Billion)



Source: BloombergNEF. <https://www.bloomberg.com/news/articles/2022-01-27/energy-transition-drew-record-755-billion-of-investment-in-2021>.

transition is an essential step to achieving Sustainable Development Goals. However, additional investments are needed to achieve the Sustainable Development Goals. Investments are needed in clean-energy infrastructure, sustainable and low-carbon transportation, energy efficiency in buildings and industry, and forestry to limit the global average temperature increase to 2°C above pre-industrial levels.

Public resources are limited; therefore, reliance on public-sector investment must be minimised and greater emphasis should be placed on encouraging private finance. However, there are barriers to effective private sector participation that must be addressed. These include fossil-fuel subsidies, lack of a predictable policy and regulatory environment, barriers to international trade and investment, and inadequate support for green technologies to promote their competitiveness. Therefore, a wide range of policy interventions is required to shift investment from fossil fuels to clean energy (OECD, 2015a). Moreover, to accelerate and guide the green growth transformation, governments, investors and international organizations must cooperate to identify challenges and promote green investments.

2.3 Foreign Direct Investment (FDI)

According to the International Monetary Fund (IMF), foreign direct investment (FDI) refers to an investment made to acquire a lasting stake in enterprises operating outside of the economy of the investor. Further, in FDI cases, the investor's purpose is to gain an effective voice in the management of the enterprise.

FDI can enhance growth and innovation, create quality jobs and develop human capital, including for women, and raise living standards and environmental sustainability. By linking domestic and multinational firms, it enables domestic firms to access international markets and integrate into global value chains. FDI is also crucial to better recover from the COVID-19 crisis and achieve the Sustainable Development Goals (SDGs).

Furthermore, realising the potential benefits from FDI is not a given. Some countries benefit more from FDI due to a number of factors like the type of FDI projects or the characteristics of the host country (Gestrin, 2016). In addition, there is always a risk that multinational enterprises will change their existing investment plans and disinvest. In particular, divestment by MNEs is an important global phenomenon that can affect host country economies, including reducing economic growth or export revenues. Factors such as high political/economic uncertainties and frequent changes in investment-related rules and procedures tend to discourage FDI. To this end, it is important to pay attention to policies aimed at ensuring a sound investment environment to retain existing investors (OECD, 2020).

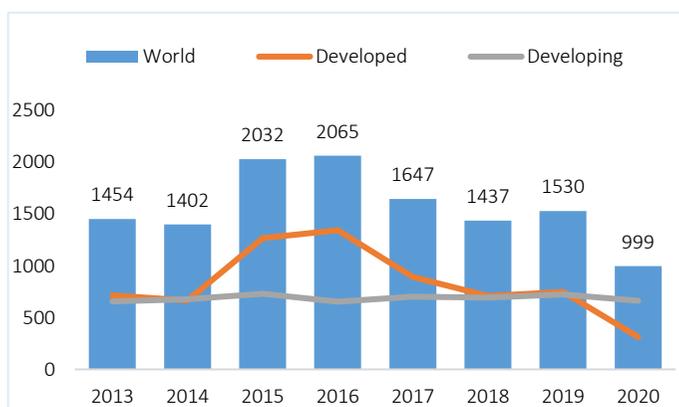
The correlation between FDI and economic growth in OIC countries was found to be positive but weak (SESRIC, 2015). This implies that the impact of FDI on economic growth and development in OIC countries, on average, is limited. The reason why FDI has a limited impact on economic growth performance in OIC countries can be attributed to three main reasons: crowding out of local investments, quality of FDI, and absorption capacity of OIC countries (SESRIC, 2015; ICIEC et al., 2017).

2.3.1 Inward FDI Trends

Total global foreign direct investment (FDI) inflows amounted to US\$ 1.53 trillion in 2019, marking an increase of more than US\$ 93 billion over the previous year's value of US\$ 1.43 trillion (Figure 2.25). It dropped dramatically from US\$ 1.53 trillion in 2019 to US\$ 999 billion in 2020, reflecting a 35% reduction in global FDI inflows due to the COVID-19 pandemic.

The pandemic had a significant negative impact on FDI flows. Lockdowns around the world slowed investment projects, and high expectations of a global recession discouraged international investors and led them to reconsider the feasibility of new projects. According to the United Nations Conference on Trade and Development's World Investment Report (UNCTAD, 2021), global FDI flows fell dramatically in 2020, back to the 2005 levels, due to the pandemic.

Figure 2.25: FDI Inflows in the World (Billion US\$)

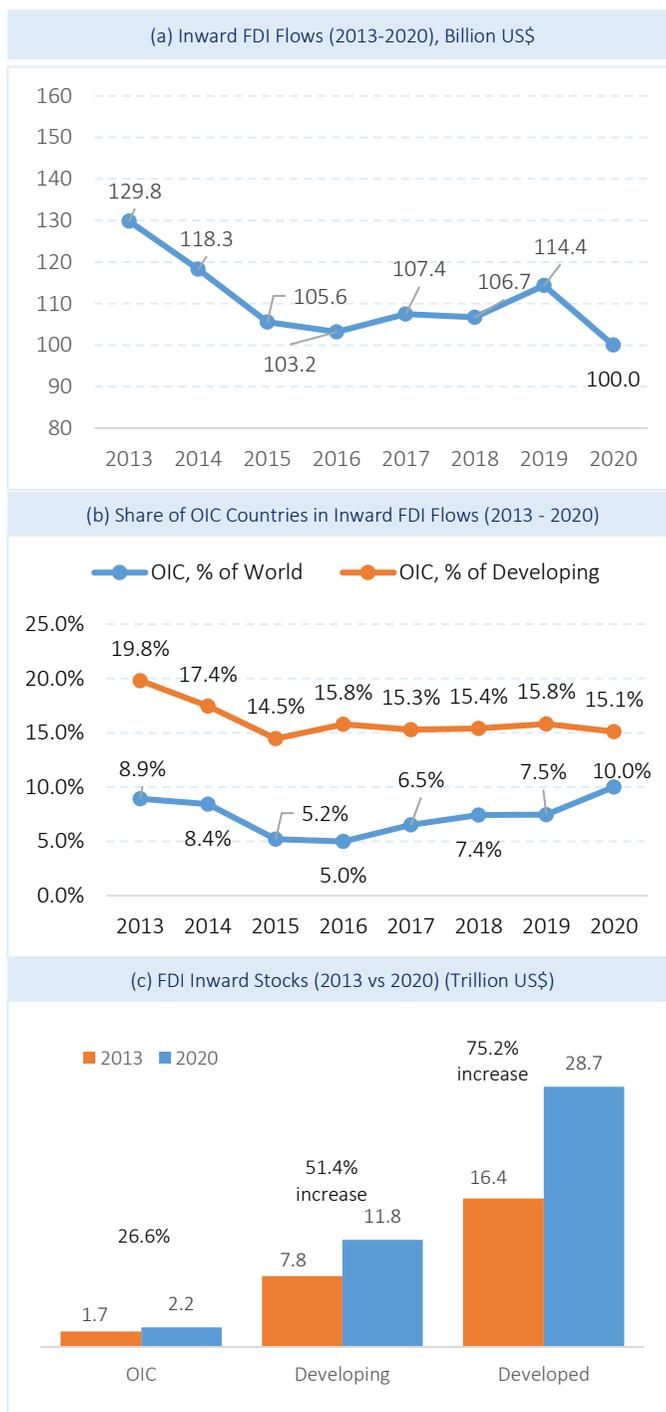


Source: UNCTAD WIR 2021

Over the period 2013-2019, FDI inflows to developed countries followed a positive trend. Yet, they decreased by 58.3% to US\$ 312 billion, while inflows to developing countries decreased only by 8% to US\$ 662 billion, mainly due to resilient flows to Asia. Although global FDI flows are not expected to contract further, projections indicate a

moderate increase of 10 to 15% in 2021, with total FDIs still about 25% below the 2019 level. Moreover, this improvement is estimated to be driven by developed economies, as they are expected to increase by 15-20%, compared with 5-10% for developing economies (UNCTAD 2021; SESRIC, 2022).

FDI inflows to OIC countries were declining over the period 2013-2019. They went down from US\$ 129.8 billion in 2013 to US\$ 114.4 billion in 2019. With the outbreak of the pandemic, it declined further and was recorded at US\$ 100 billion in 2020, reflecting a 12.6% reduction in inflows (Figure 2.26a). Figure 2.26a reveals that total FDI flows to OIC countries generally remained lower than their potential. After reaching US\$ 129.8 billion in 2013, FDI inflows to OIC countries have not been able to reach that level since then.

Figure 2.26: Inward FDI Flows and Stocks in OIC Countries


Source: UNCTAD WIR 2021

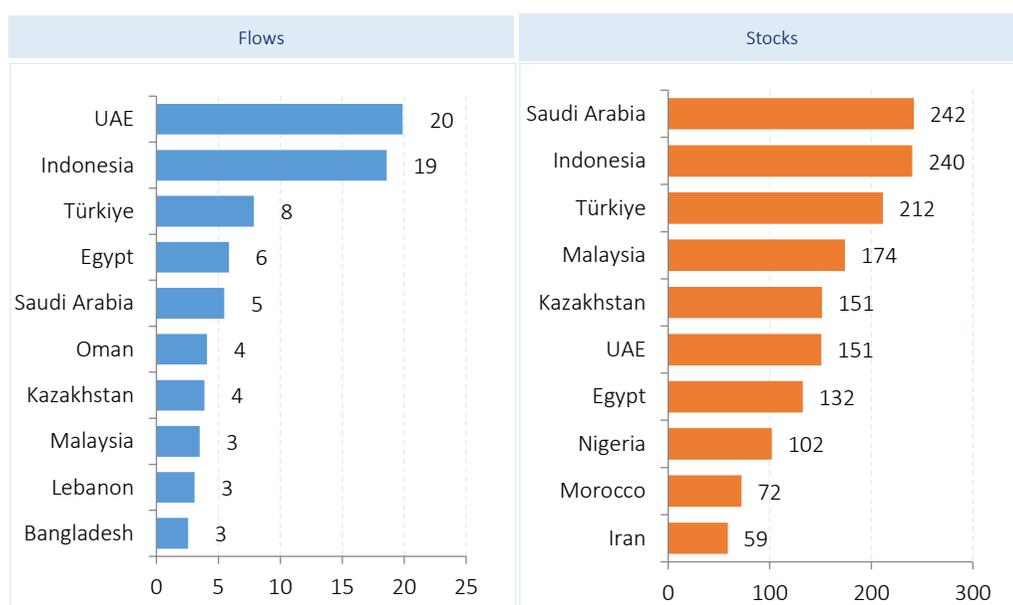
The share of OIC countries in global FDI inflows was increasing even before the outbreak of the pandemic. It further reached 10% in 2020 due to the slowdown in global FDI inflows. (Figure 2.26b). However, due to the rapid increase in FDI inflows to developing countries, the share of the OIC group steadily declined from 19.8% in 2013 to 15.1% in 2020.

In terms of FDI stocks, the global inward FDI stocks reached US\$ 41.3 trillion in 2020. The OIC countries collectively recorded US\$ 2.2 trillion stock of FDI in 2020 (Figure 2.26c). Although inward FDI stocks in OIC countries grew by more than 26.6% since 2013, this increase was lower than that of other country groups, resulting in a fall in its share in global FDI stocks from 6.9% in 2013 to 5.2% in 2020.

At the individual country level, UAE (US\$ 20 billion), Indonesia (US\$ 19 billion) and Türkiye (US\$ 8 billion) were the top performing OIC countries in terms of inward FDI flows in 2020. Saudi Arabia (US\$ 242 billion), Indonesia (US\$ 240 billion) and Türkiye (US\$ 212 billion) were the top three OIC countries in terms of inward

FDI stocks in 2020 (Figure 2.27). FDI flows to OIC countries and inward stocks exhibited a high level of concentration, with the bulk of these flows still going to a few OIC countries. The top 10 OIC countries with the largest inward FDI flows together accounted for 73% of total FDI flows to OIC countries, whereas the top 10 countries accounted for 71% of the total inward FDI stocks in OIC countries.

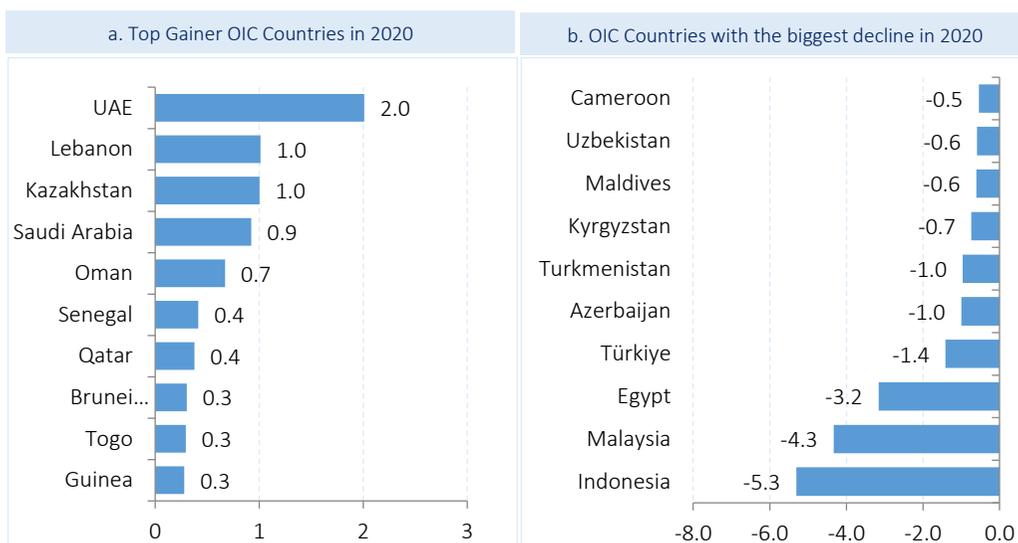
Figure 2.27: Top 10 Hosts of Inward FDI Flows and Stocks (2020, US\$ Billion)



Source: UNCTAD WIR 2021.

To reduce the impacts of the pandemic on FDI inflows, many countries across the world are trying to speed up investment approval procedures, promote extensive use of online tools and e-platforms, and offer incentive schemes for health-related R&D to alleviate the impact on investment flows and local businesses (UNCTAD, 2020). Given their investment climate and efforts to welcome more FDI, at the individual country level, a number OIC countries even managed to attract more FDI in 2020 compared to 2019, despite the uncertainties brought about by the pandemic. The United Arab Emirates topped the list of OIC countries that attracted more FDI (US\$ 2 billion more) in 2020 compared to 2019. It was followed by Lebanon (US\$ 1 billion more), Kazakhstan (US\$ 1 billion more), and Saudi Arabia (US\$ 0.9 billion more). On the other side of the spectrum, some OIC countries recorded significant declines in their FDI inflows in 2020 compared to 2019 such as Indonesia (a decline of US\$ 5.3 billion), Malaysia (a decline of US\$ 4.3 billion), and Egypt (a decline of US\$ 3.2 billion) (Figure 2.28).

Figure 2.28: Performance of Selected OIC Countries during COVID-19 by FDI Inflows (change in 2020 over 2019, US\$ Billion)

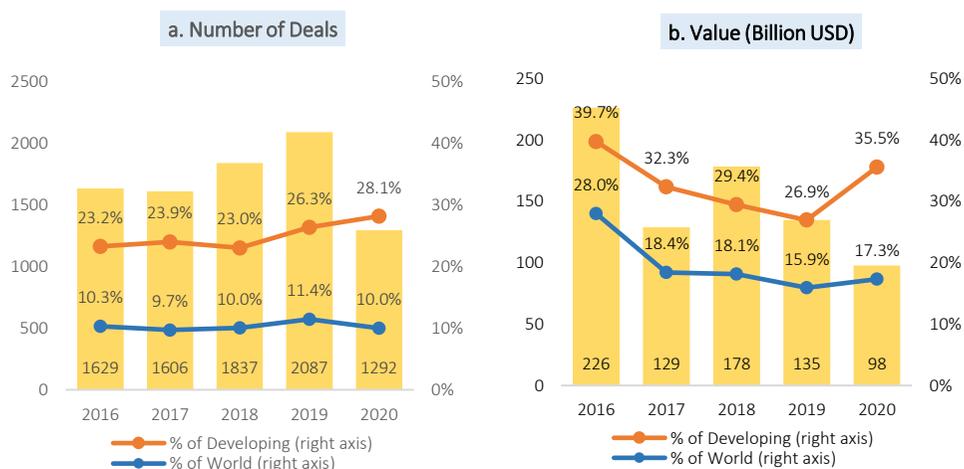


Source: UNCTAD WIR 2021

2.3.2 Greenfield Investments

Greenfield investments, which are of particular importance to developing countries due to the greater growth and employment opportunities they have to offer, dropped by 33.3% globally to a record low level of US\$ 564 billion in 2020.

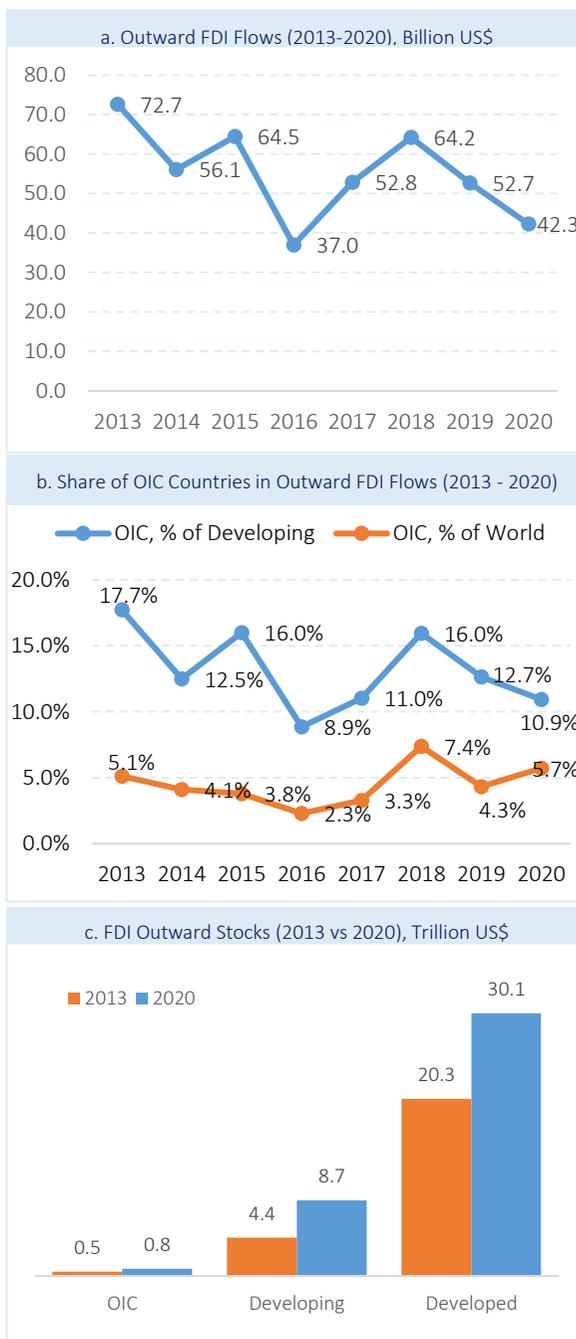
Figure 2.29: Announced Greenfield Investment Projects Destined to OIC Countries



Source: UNCTAD WIR 2021

However, compared to the patterns in overall FDI inflows, greenfield investments declined more in developing countries (45.1%) than in developed countries (16.4%) (SESRIC, 2021). In OIC countries, the decline was also substantial, both in terms of value and number of announced greenfield FDI projects (Figure 2.28). The number of projects fell by 38.1% to 1292 –the lowest since 2008– while the value of the projects fell by 27.4% to US\$ 98 billion –below US\$ 100 billion for the first time, with available data dating back to 2003. Accordingly, in terms of number of projects, OIC countries accounted for 10.0% of the world total in 2020, compared with 11.4% in 2019, while their share in the total of developing countries increased from 26.3% to 28.1% (Figure 2.29a). In terms of project value, their share in both the world total and the developing country total increased from 15.9% to 17.3% and from 26.9% to 35.5%, respectively, during 2019-2020 (Figure 2.29b).

Figure 2.30: Outward FDI Flows and Stocks in OIC Countries



Source: UNCTAD WIR 2021

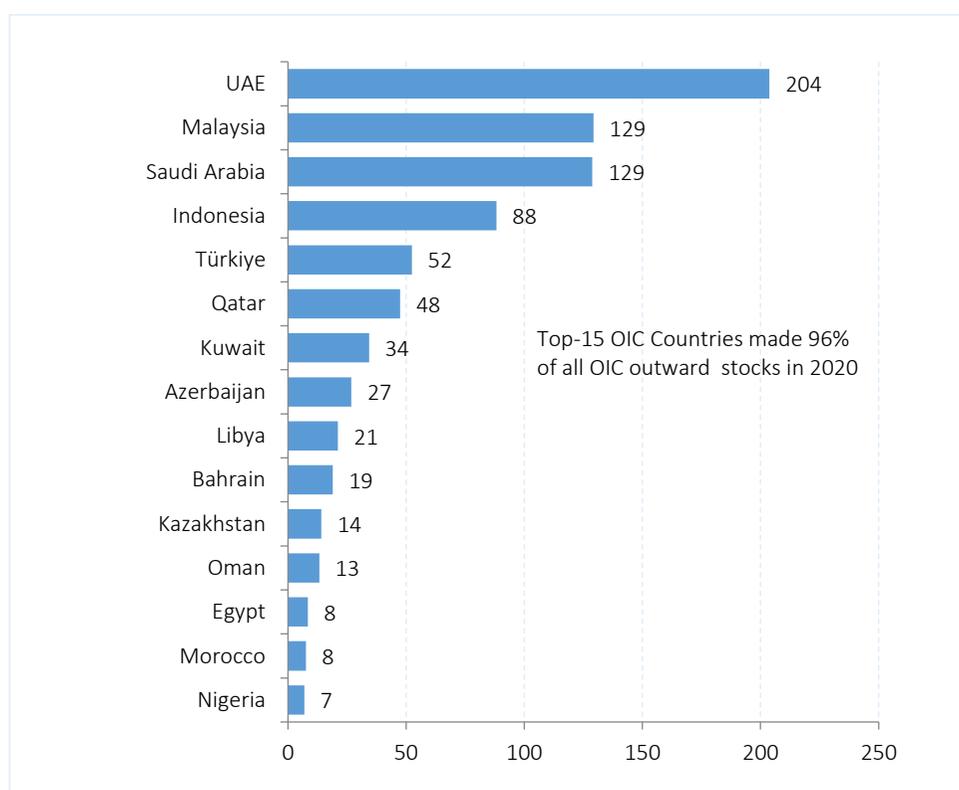
2.3.3 Outward FDI Trends

Outward FDI flows originating from OIC countries collectively declined from US\$ 72.7 billion in 2013 to US\$ 52.7 in 2019. The pandemic further slowed down FDI outflows from OIC countries and measured at US\$ 42.3 billion in 2020, indicating a decline of 19.8% (Figure 2.30a). The slowdown in the pace of FDI outflows in OIC countries was rapid compared to developing countries.

Moreover, some developing countries such as China and India recorded significant FDI outflows in recent years. Consequently, the share of OIC countries in outward FDI flows of developing countries declined from 17.7% in 2013 to 10.9% in 2020. At the global level, OIC countries, as a group, have become a more important investor group, with their share in the world increasing from 5.1% in 2013 to 5.7% in 2020 (Figure 2.30b). Overall, outward FDI stocks of OIC countries increased by US\$ 0.3 trillion (corresponding to a 60% increase) between 2013 and 2020. However, both developing and developed countries also recorded substantial improvements in their outward stocks. Developing countries almost doubled their outward FDI stocks to US\$ 8.7 trillion in 2020. Over the period 2013-2020, outward FDI stocks of developed countries grew by 48% and exceeded US\$ 30 trillion in 2020 (Figure 2.30c).

The top-15 OIC countries with the highest amount of outward FDI stocks accounted for 96% of the total OIC outward stocks in 2020. The remaining 42 OIC countries collectively accounted for only 4% of the total OIC outward stocks in the same year. In other words, there is a high concentration of outward FDI stocks in a number of OIC countries such as UAE (US\$ 204 billion), Malaysia (US\$129 billion) and Saudi Arabia (US\$ 129 billion) (Figure 2.31).

Figure 2.31: Top 15 Investor OIC Countries (Outward FDI Stocks, 2020, US\$ Billion)

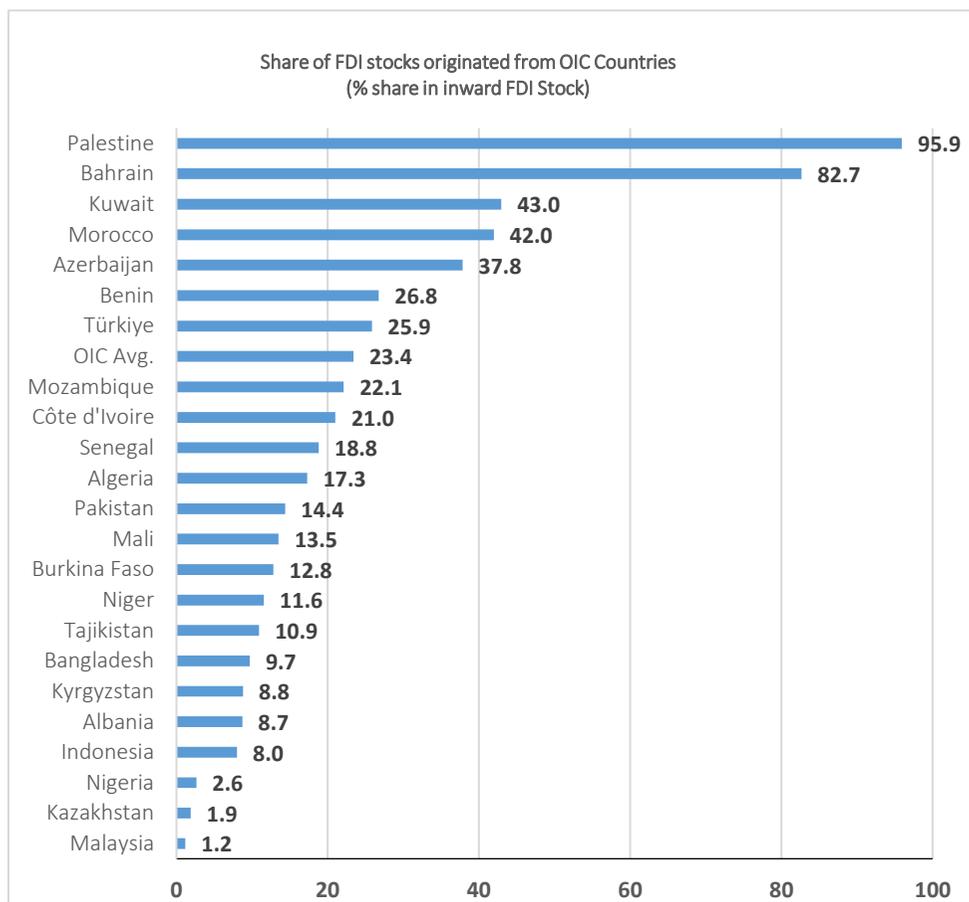


Source: UNCTAD WIR 2021.

2.3.4 Intra-OIC FDI Trends

Intra-OIC FDI reflects the directed investment from one OIC source country to another OIC host country. As in other dimensions of economic integration among the OIC countries (e.g. intra-OIC trade and tourism), the trends of intra-OIC FDI can be considered as an indicator to assess the level of economic integration among the OIC countries. A higher volume of intra-OIC FDI figure implies the existence of stronger economic ties among the OIC countries.

Figure 2.32: Major Intra-OIC FDI Hosting OIC Countries, 2020

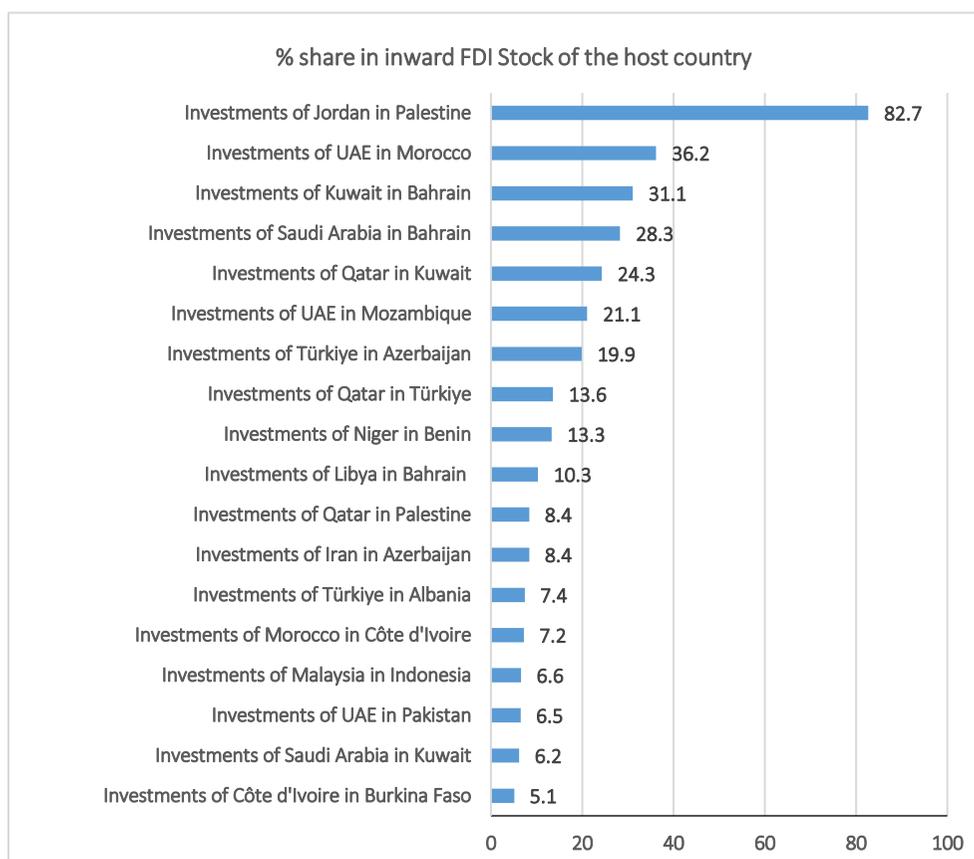


Source: UNCTAD WIR 2021. Note: Data are available only for 23 Recipient OIC countries and 56 Investor OIC countries.

According to UNCTAD estimates, some OIC countries have benefited to a greater extent from intra-OIC cooperation. For example, in Palestine (95.6%), Bahrain (82.7%), Kuwait (43%), and Morocco (42%), more than 40% of inward FDI stocks originated from OIC countries (Figure 2.32). At the individual country, there is a high concentration in a number of countries. For example, in Palestine, 82.7% of the inward FDI stocks were made by Jordanian investors. In Morocco, more than 36% of the inward FDI stocks were built by UAE investors. In Bahrain,

investments originating from Kuwait accounted for a share of more than 30% in 2020 (Figure 2.33). Based on the limited data available on intra-OIC FDI cooperation, it is evident that, as in other FDI statistics, there is a high level of concentration in a few OIC countries. Therefore, there is a need to take measures to enhance intra-OIC FDI cooperation, especially by incentivizing and promoting intra-OIC FDI projects.

Figure 2.33: Major Intra-OIC Investor Countries in 2020



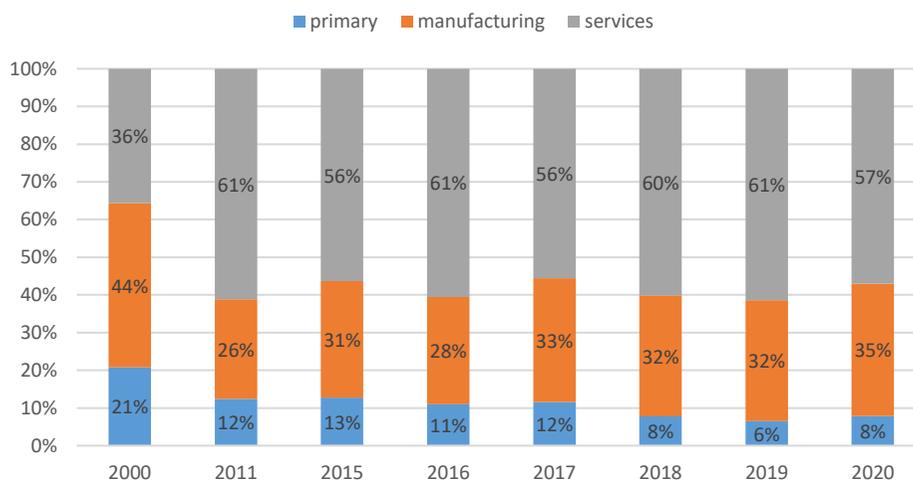
Source: UNCTAD WIR 2021. Note: Based on UNCTAD estimations, countries with a higher than 5% share in inward FDI stocks are reported

2.3.5 Sectoral FDI Trends

Looking into the sectoral distribution of inward FDI stocks in the OIC countries could provide additional insights into the profile of investors and the ongoing sectoral transformation in the OIC region. Over the past two decades, globalization has led to a relative decline in the shares of the primary and manufacturing sectors at the expense of services. The service sector has gained importance with the rise of global value chains (UNCTAD, 2021). The reduced transportation and communication costs through technological advances have enabled such a transformation. As in developed and developing countries, an increasing number of FDI

projects were devoted to services in several OIC countries. As a result, its share in the total inward FDI stocks climbed up from 36% in 2000 to 57% in 2020 in the OIC group (Figure 2.34). Two other sectors, namely the primary sector and manufacturing industry, recorded a decline in their relative shares in the total inward FDI stocks in the OIC countries. The share of the primary sector particularly went down from 21% in 2000 to 8% in 2020. This negative trend also caused the share of the manufacturing sector to fall from 44% in 2000 to 35% in 2020. It is evident that with the rise of automation, IT and artificial intelligence technologies, the service sector has become globalized and can be an important growth driver in the global FDI landscape. Taking this trend into consideration, OIC countries should craft their FDI policies carefully. As many OIC countries, especially those located in Sub-Saharan Africa, are trying to emerge from the status of developing countries by achieving industrial transformation, it is essential to understand the role of the services sector and its catalytic role for sustainable development.

Figure 2.34: FDI Inward Stocks in OIC Countries by Sectors (%)



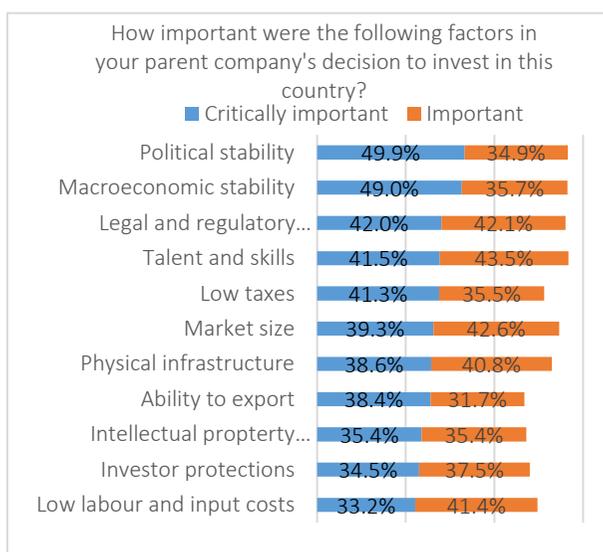
Source: UNCTAD WIR 2021

3. Investment Ecosystem in the OIC Countries

Investment is undoubtedly the most powerful development tool in the world today. As developing countries need more capital and investment to fuel their economic growth, their efforts to provide a more investor-friendly ecosystem are crucial to their development (World Bank, 2004).

Yet, it is not only the quantity of investment that matters in promoting growth and sustaining development. Productivity gains, which result from investment-induced product and process innovation, are of paramount importance. It is therefore the investment ecosystem that needs to provide opportunities and incentives for firms

Figure 3.1: Determinant Factors of Investment
(% Share of Respondents)



Source: World Bank's 2019 Global Competitiveness Survey Note: Affiliates of MNEs were surveyed in ten developing countries including four OIC countries (Indonesia, Malaysia, Nigeria and Türkiye)

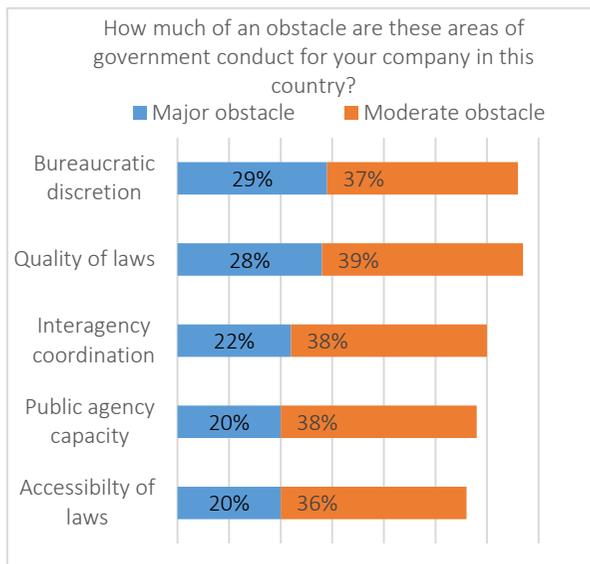
(domestic and foreign) and entrepreneurs to develop, adapt and adopt better ways of doing business as well as to encourage investment (World Bank, 2014). The prevailing investment ecosystem affects both the quality and quantity of investments while influencing to a large extent the developmental effects of investments. In this respect, this chapter provides a candid discussion on the investment ecosystem in OIC countries in light of selected indicators and indices to provide insights for identifying gaps and obstacles that impede investments.

3.1 Determinant Factors of Investment

Investors, regardless of their origin (domestic or foreign) seek to maximise the benefits of their investments. While some investors focus on short-term gains, the majority would like to have a business model capable of generating medium and long term profits.

According to the 2019 Global Investment Competitiveness Survey reported by the World Bank (2020), investors (affiliates of MNEs) from ten developing countries, including four

Figure 3.2: Obstacles for Investment
(% Share of Respondents)



Source: World Bank 2019 Global Competitiveness Survey
 Note: Affiliates of MNEs were surveyed in ten developing countries including four OIC countries (Indonesia, Malaysia, Nigeria and Türkiye)

OIC countries (Indonesia, Malaysia, Nigeria, and Türkiye), were asked to select the importance of a set of factors that determine their investment decision. Although several factors influence the decision of investors simultaneously, it is important to understand their order of importance. According to Figure 3.1, political stability, macroeconomic stability, and the legal and regulatory environment are the top three determining factors for investors. More than 42% of investors consider them a “critically important” factor in their investment decisions. In

addition to these three factors, talent and skills and low taxes are two other factors considered critical by investors.

Identifying the factors that constitute an enabling environment for increased investments matters a great deal. Identifying the main barriers to investment is equally important for policymakers. In this way, they could design reforms to create more investment-friendly ecosystem while trying to remove the existing barriers to investment.

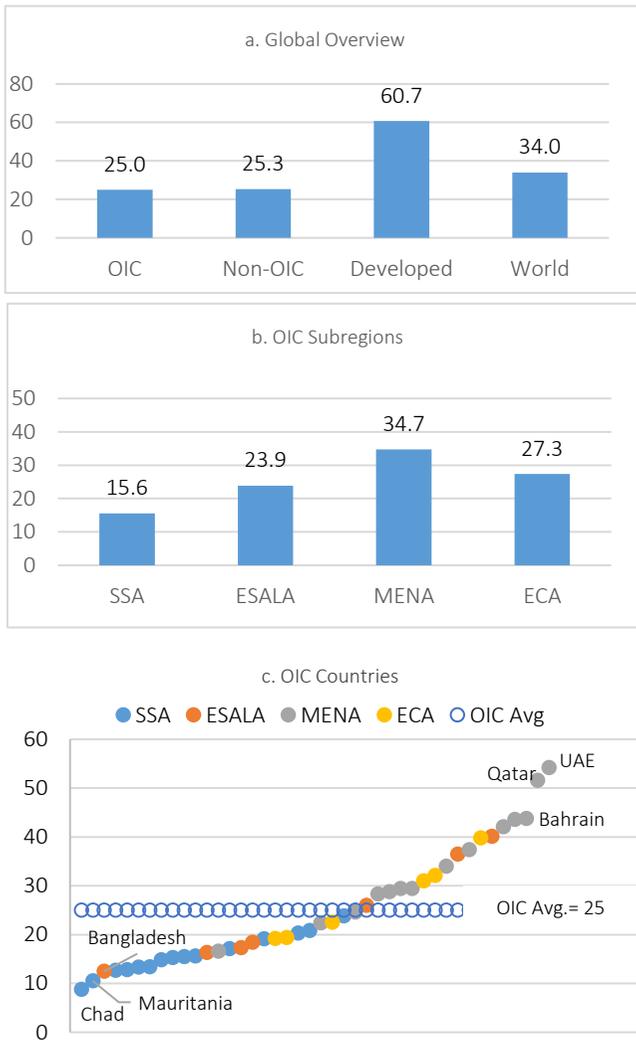
According to the 2019 Global Investment Competitiveness Survey, 29% of investors perceive bureaucratic discretion as a major obstacle. 28% of respondents think that poor quality of laws is a major obstacle for investors (Figure 3.2). It is followed by factors related to interagency coordination and public agency capacity.

3.2 Entrepreneurship

Around the world, entrepreneurs play a significant role in boosting investment and fostering growth and development. Gries and Naudé (2011) define entrepreneurship as “the resource, process and state of being through and in which individuals utilize positive market opportunities by creating and growing new business ventures.”

An environment that enables entrepreneurs to start their businesses can also be considered as investor-friendly. In this respect, the Global Entrepreneurship Index (GEI)

Figure 3.3: Global Entrepreneurship Index Scores, 2019



Source: The GEDI Institute. Note A higher score implies Best Attitude and Potential for Overall Entrepreneurship

25, in 2019 (Figure 3.3a). In the same year, the global average was 34. Non-OIC developing countries had an average score of 25.3, almost the same as the OIC group. Developed countries offered the best environment for entrepreneurs (including investors) and scored 60.7. At the OIC sub-regional level, wide disparities exist, and SSA scored the lowest in the GEI (15.6), mainly due to poor infrastructure (Figure 3.3b). Only the OIC MENA region (34.7) had an average score above the world average. The OIC ECA region scored (27.3) above the OIC average.

defines the entrepreneurship ‘ecosystem’ as a set of attitudes, resources, and infrastructure. The GEI is an annual index that measures the health of entrepreneurship ecosystems in 137 countries and provides a picture of how each country’s performance in the national and international context. The index utilizes data on the entrepreneurial attitudes, abilities, and aspirations of the local population, and then weights these against the existing social and economic ‘infrastructure’ – this includes aspects such as broadband connectivity and the transport links to external markets. This process creates 14 pillars that measure ecosystem health.

The relative performance of the country groups in the GEI is presented in Figure 3.3. A higher GEI score implies a better environment for entrepreneurial activities. OIC countries had, on average, the lowest GEI score, measured at

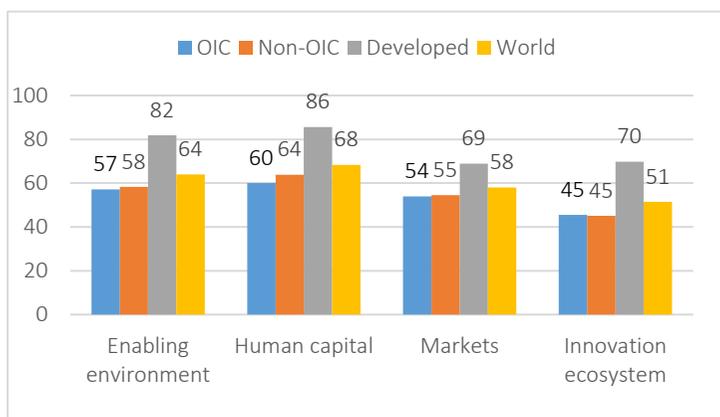
At the individual country level, the GEI scores of OIC countries vary. 25 OIC countries could not score above the OIC average. 17 OIC countries scored above the OIC average of 25 (Figure 3.3c). The United Arab Emirates (54.2), Qatar (51.6), and Bahrain (43.8) were the highest scoring OIC countries in 2019, all located in the MENA region. Chad (8.8), Mauritania (10.5), and Bangladesh (12.5) had the lowest GEI scores in 2019, reflecting a relatively challenging environment for entrepreneurs to undertake their business activities and investments.

3.3 Competitiveness

The globally recognized composite index used to measure and assess the investment ecosystem is the ‘Global Competitiveness Index 4.0’ (GCI). The GCI has four dimensions (enabling environment; human capital; markets; and innovation ecosystem) and 12 pillars, namely institutions; infrastructure; ICT adoption; macroeconomic stability; health; skills; product market; labour market; financial system; market size; business dynamism; and innovation capability. The GCI of the World Economic Forum describes competitiveness as “the set of factors, policies, and institutions that determine a country's level of productivity, taking into account its level of development. More competitive economies have higher GCI scores and offer investors a better environment to grow and sustain their operations. Such an enabling environment also has a positive impact on productivity gains and profitability, and economic growth (SESRIC, 2014).

In 2019, the OIC group scored relatively low in four key GCI dimensions (Figure 3.4). The lowest score of the OIC group was observed in the innovation ecosystem dimension, which is measured at 45. The highest score of the OIC group was recorded in the human capital dimension, which is measured at 60. Yet, the OIC countries, as a group, could not score higher than the other country groups and the world average, indicating the barriers

Figure 3.4: Global Competitiveness Index Scores by Four Main Dimensions, 2019



Source: World Economic Forum, 2019. Note: Distance-to-frontier values are used in calculations and a higher score means a better performance in the certain segment

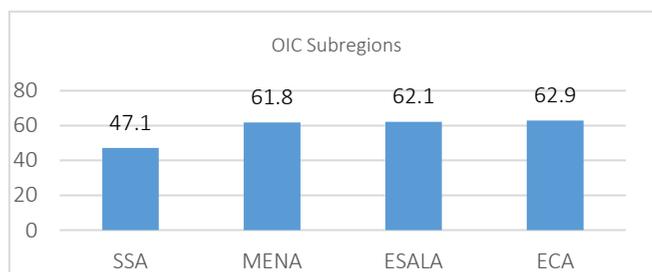
to competition that also negatively affect the ease of doing business and the motivation to make new investments. Nevertheless, there are four pillars out of 12 where OIC countries, on average, scored higher than non-OIC countries, including institutions, product market, market size, and business dynamism (Table 3.1).

Table 3.1: Global Competitiveness Index 4.0 Scores by Pillars, 2019

Pillars	Dimension I. Enabling Environment				Dimension II. Human Capital	
	Institutions	Infrastructure	ICT Adoption	Macroeconomic Stability	Health	Skills
OIC	50.7	58.2	46.4	72.9	66.5	53.6
Non-OIC	49.6	59.5	49.4	74.7	71.0	56.7
Developed	69.8	84.0	75.9	97.7	93.1	78.0
World	55.1	65.4	55.3	80.1	75.4	61.3
Pillars	Dimension III. Markets				Dimension IV. Innovation Ecosystem	
	Product market	Labour market	Financial system	Market size	Business dynamism	Innovation capability
OIC	53.1	54.9	55.1	52.8	56.2	34.8
Non-OIC	51.8	57.7	58.6	50.1	55.3	34.8
Developed	64.0	69.7	77.5	64.6	72.5	67.0
World	55.3	60.0	62.4	54.5	60.0	43.0

Source: World Economic Forum, 2019. Note: Distance-to-frontier values are used in calculations and a higher score means a better performance in the certain segment

A closer look at the GCI's *Enabling Environment* sub-index may help us better understand the existing heterogeneity among OIC sub-regions, which stems from varying performance at the individual country level. Wide disparities exist at the OIC sub-regional level. SSA scored the lowest (47.1) in 2019 and all other OIC regions scored higher than the OIC (57.1) and non-OIC (58.3) countries (Figure 3.5). The average score of the SSA

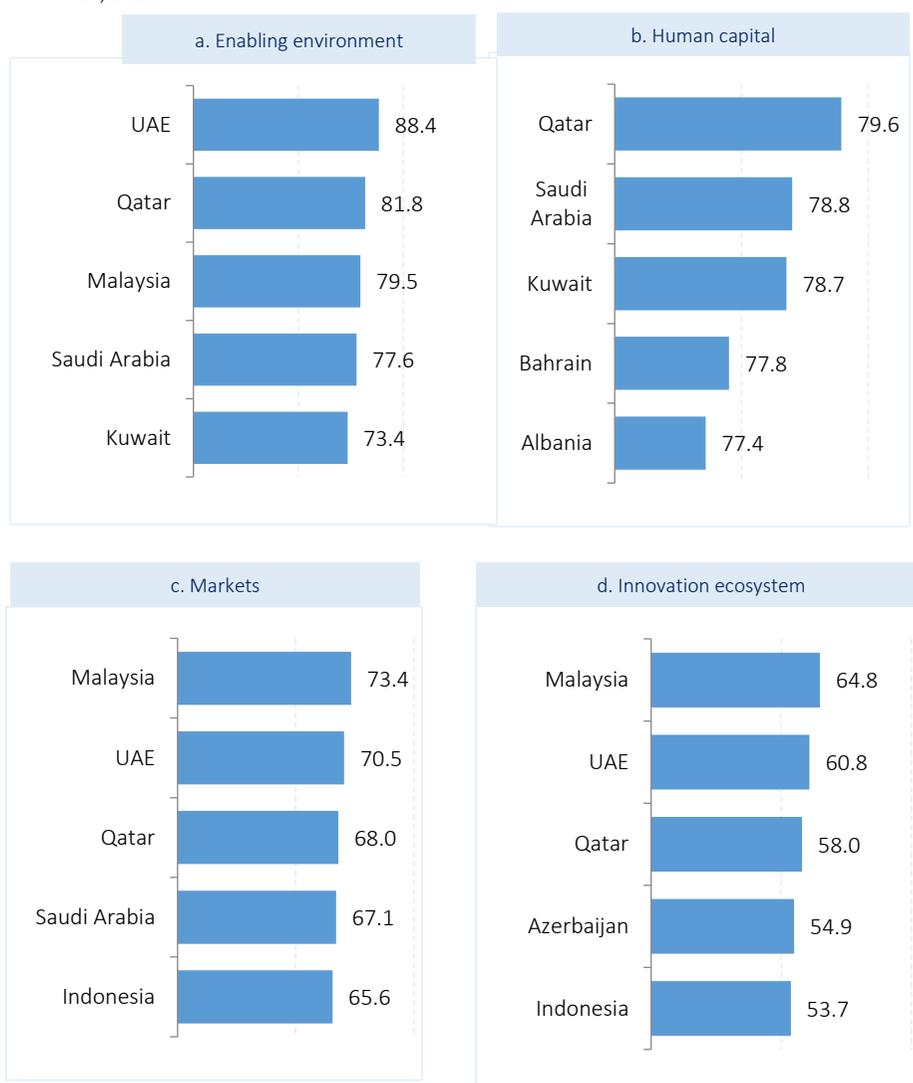
Figure 3.5: Enabling Environment Subindex Scores of the Global Competitiveness Index 4.0, 2019

Source: World Economic Forum (WEF) Note A higher score a more enabling environment for doing business, trade and investment

region was measured at 47.1, which is well below the averages for the MENA (61.8), ESALA (62.1), and ECA (62.9) regions. In other words, OIC countries in the SSA region need to exert more efforts to provide a more investor-friendly environment that would help boost competitiveness and investment.

At the individual country level, the UAE, Qatar, and Malaysia were top performing OIC countries in the enabling environment dimension (Figure 3.6). In the human capital dimension, Qatar, Saudi Arabia, and Kuwait had the most competitive environment while in the market dimension, Malaysia, UAE and Qatar were the top three OIC countries. Lastly, Malaysia, UAE, and Qatar had the highest scores in the innovation ecosystem dimension (within the GCI) in 2019.

Figure 3.6: Top Performer OIC Countries by Dimensions of the Global Competitiveness Index Scores, 2019



Source: World Economic Forum, 2019. Note: Distance-to-frontier values are used in calculations and a higher score means a better performance in the certain segment

3.4 Country Risks

Over the last two decades, the OECD Country Risk Classification (CRC) has become an important indicator widely used by investors, researchers, multilateral institutions, as well as public officials to track and monitor the prevailing risks in countries across the globe (OECD, 2017). Country risk classifications are meant to reflect the country risk that encompasses transfer and convertibility risk (i.e. the risk that a government imposes

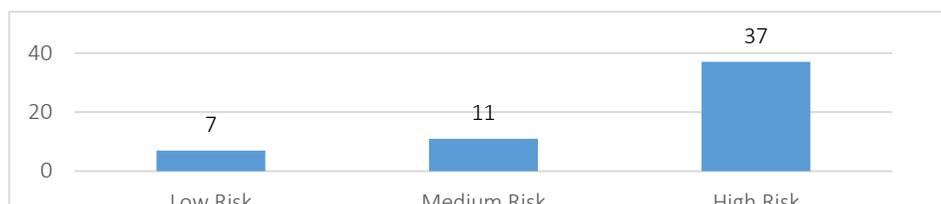
capital or exchange controls that prevent an entity from converting local currency into foreign currency and/or transferring funds to creditors located outside the country) and force majeure (e.g. war, expropriation, revolution, civil disturbance, floods, earthquakes ...).

The Country Risk Classification (CRC) indicator was first developed in 1997 by the participants to the Arrangement on Officially Supported Export Credits with a view to setting minimum premium rates for government-supported transactions under the Arrangement. The list of country risk classifications is also made public so that any country that is not an OECD Member or a Participant can make use of the indicator.

The indicator takes values between 0 and 7 through the application of a two-step methodology comprising both quantitative and qualitative assessment. A higher value represents the existence of higher risk exposure for investors. Although the prevailing country risk has many implications for domestic investors, it influences the decisions of foreign investors to a greater extent. In particular, foreign investors tend to make their direct investments in countries with lower country risk classification scores. This can also be observed in the group of OIC Countries. For example, SESRIC and ICIEC (2017) found that a one-unit decrease in the country risk classification score resulted in an average increase of US\$ 16.5 billion in inward FDI stocks in OIC countries, which stemmed from re-investments in existing FDI projects and attraction of new foreign investors from abroad. This implies that OIC countries with lower risk scores tend to attract more investors.

According to Figure 3.7, the majority of OIC countries (37 countries) were classified as high risk (category 6 or 7) according to the March 2022 edition of the OECD Country Risk Classification dataset. Seven OIC countries were classified as low-risk (category 2 or 3), and another 11 OIC Countries scored 4 or 5, and were thus placed in the medium risk group. Overall, 18 OIC countries had scores below the OIC average of 5.8 and 37 OIC countries had relatively higher country risks that their average scores exceeded the OIC average of 5.8. In other words, 67% of the OIC countries, with available data, do not offer a conducive environment for investors and are therefore classified as high-risk countries. The lack of an enabling environment, especially for (foreign) investors, implies the existence of serious challenges and threats to investors that deteriorate the investment ecosystem in these OIC countries. Moreover, OIC countries are home to a number of conflict hotspots in the world, which increases their fragility and exposure to risks. In a country with high fragility, investment is a high-risk activity. Not only are returns and profits at stake but physical investment in a fragile context can also be harmed, especially due to armed conflict and street movements. For this reason, country fragility is an important factor that investors consider when deciding to invest. According to the Fragile State index of the Fund for Peace (2021), six of the ten most fragile countries in the world, such as Yemen, Somalia and Afghanistan, are members of the OIC in 2021.

Figure 3.7: OIC Countries by the OECD Country Risk Scores, 2022



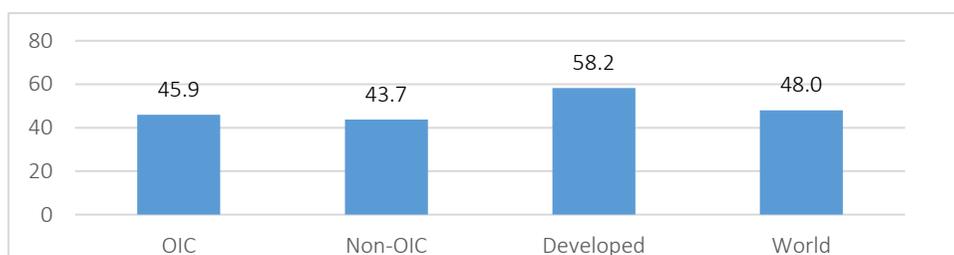
Source: OECD, 2022 (as of March 2022)

Note: Low risk category: scores of 2 and 3; Medium risk category: scores of 4 and 5; High risk category: scores of 6 and 7

3.5 Cost of Financing

As explained above, exposure to high country risks not only deteriorates the overall investment ecosystem but investment financing also becomes more challenging and costly due to an increased risk-premium. A lower score in the “ICG SME Finance Sub-index” published by the World Economic Forum in 2019 implies a more challenging environment for SMEs and investors from a financial perspective. In this sub-index, OIC countries scored an average of 45.9 in 2019. The average score for OIC countries stayed well below the world average (48) and the developed country average (58.2). Only non-OIC countries scored (43.7) lower than the OIC group (Figure 3.8).

Figure 3.8: Financing of SMEs Subindex Scores, 2019

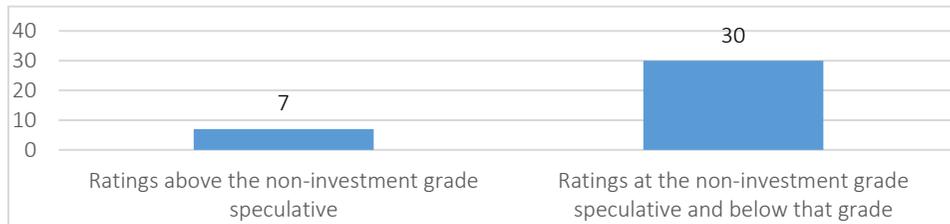


Source: World Economic Forum (WEF) Note A higher score a more enabling environment for financing of SMEs

In a similar vein, Moody's Long-term Sovereign Ratings of OIC Countries revealed that the majority of OIC countries are at high country risk in 2022. 30 OIC countries are rated by Moody's in the “non-investment-grade-speculative” category and below (extremely, highly speculative and default risk). In these OIC countries, the cost of borrowing is not only relatively high, but some investors do not consider investing in these countries at all due to their high-risk exposure. This results in a high level of ‘investment gaps’, reflecting the gap between the potential of the country and the investments made (SESRIC, 2014; SESRIC, 2015). Only in seven OIC Countries, namely Indonesia, Kazakhstan, Kuwait,

Malaysia, Qatar, Saudi Arabia, and the United Arab Emirates had ratings been registered above the non-investment-grade-speculative, as classified by Moody's (Figure 3.9).

Figure 3.9: Moody's Long-term Sovereign Ratings of OIC Countries, 2022 (number of countries)



Source: Author's construction based on data obtained from damodaran.com

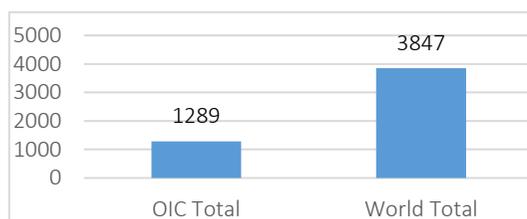
3.6 The Ease of Doing Business

The Ease of Doing Business Index measures regulations directly affecting businesses. A nation's ranking in this index is based on the average of 10 sub-indices: 1. Starting a Business – Procedures, time, cost, and minimum capital to open a new business; 2. Building Permits – Procedures, time, and cost to build a warehouse; 3. Electricity – Procedures, time, and cost for a business to obtain a permanent electricity connection for a newly constructed warehouse; 4. Registering Property – Procedures, time, and cost to register commercial real estate; 5. Obtaining Credit – Strength of legal rights index, depth of credit information index; 6. Protecting Investors – Indices on the extent of disclosure, extent of director liability, and ease of shareholder suits; 7. Payment of Taxes – Number of taxes paid, number of hours per year spent preparing tax returns, and total amount of taxes payable as a share of gross profit; 8. Cross-border Trade– Number of documents, cost, and time required to export and import; 9. Contract Enforcement – Procedures, time, and cost to enforce a debt contract; and 10. Insolvency Resolution – The time, cost, and recovery rate (%) in bankruptcy proceeding (World Bank, 2020).

Although the Doing Business indicators measure business regulations and their enforcement from the perspective of domestic small and medium-sized enterprises, the overall index score provides a good indication of the quality of the investment ecosystem for both domestic and foreign investors as they face similar formalities at many stages of their operations. It is important to note that the index does not directly measure general conditions such as a nation's proximity to large markets, infrastructure quality, inflation, or crime.

In presenting the results of the Doing Business indicators, the World Bank utilizes the "Distance to Frontier" concept. The distance to frontier indicates the distance of each

Figure 3.10: Total Number of "Doing Business Reforms", 2005-2020



Source: World Bank, Doing Business Index Database

carried out 1289 reforms in all dimensions of the EDBI since 2005 (Figure 3.10). The outcomes of these reforms have had a positive impact on the average EDBI score for OIC Countries and have been associated with higher FDI inflows in many OIC countries. Despite this wide range of reforms, the business environment in several OIC countries is rather challenging compared to developed countries. Yet, OIC countries have been able to improve their investment ecosystem by implementing over 1200 business reforms since 2005, including tax reforms, regulatory and legislative reforms, to create a more favourable environment for investors, businesses, and entrepreneurs. Some OIC countries did better than other members in terms of the number of reforms achieved, as shown in Table 3.2. For instance, in the domain of starting a business, Indonesia took the lead among the OIC countries by completing 10 reforms to ease the process of starting a business over the period 2005-2020.

Nevertheless, over the same period, similar improvements were also observed in other country groups and the competitiveness of many countries increased. In this regard, OIC countries still need to implement a series of reforms to address the remaining barriers to investment, such as legislative restrictions and bureaucratic barriers that discourage investors. For instance, OIC countries have been progressively removing restrictions on

economy from the “frontier,” which represents the best performance observed for each of the indicators among all economies in the Doing Business dataset over the 2005-2020 period.

In order to improve the business environment, OIC countries have

Table 3.2: Top Reformer OIC Countries in Subcategories of the Doing Business Index, 2005-2019

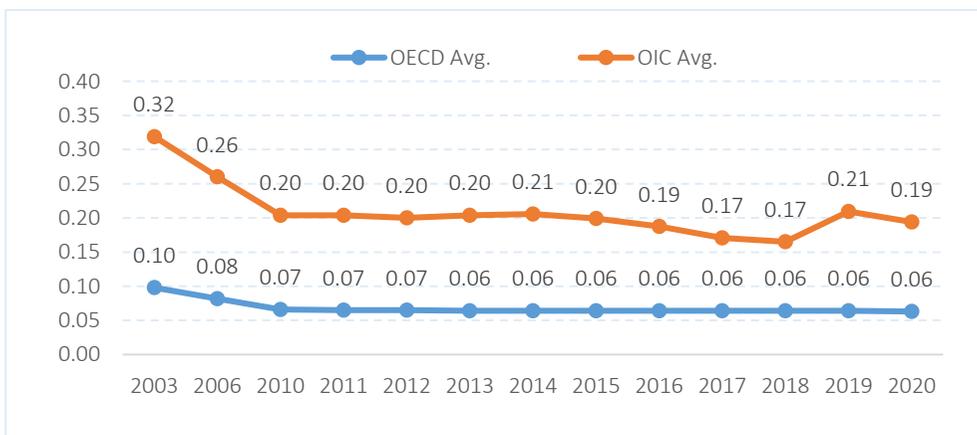
Sub-indices of Doing Business Index	Top Reformer OIC Countries
Starting a Business:	Indonesia (10)
Dealing with Construction Permits:	UAE (5) and Côte d'Ivoire (5)
Getting Electricity:	UAE (6)
Registering Property:	Senegal (7)
Getting Credit:	Azerbaijan (8) and Indonesia (8)
Protecting Minority Investors:	Egypt (7)
Paying Taxes:	Albania (8), Indonesia (8), Uzbekistan (8)
Trading across Borders:	Pakistan (7) and Uganda (7)
Enforcing Contracts:	Kazakhstan (6)
Resolving Insolvency:	Kazakhstan (4)

Source: World Bank, Doing Business database Note: The number of reforms are shown in brackets. Countries with the highest number of reforms are shown in the table

FDI in terms of their regulatory frameworks, according to the 'OECD's FDI Regulatory Restrictiveness Index Scores. The index gauges the restrictiveness of a country's FDI rules by looking at the four main types of FDI restrictions: foreign equity limitations; screening or approval mechanisms; restrictions on the employment of foreigners as key personnel; and operational restrictions, e.g. restrictions on branch offices and capital repatriation or land ownership (Kalinova et al., 2010).

Based on these dimensions, the average value of the index score went down from 0.32 in 2003 to 0.19 in 2020 in the OIC group, which reflected a significant improvement in the removal of FDI-related regulatory barriers. Over the same period, the OECD average declined from 0.10 to 0.06 (Figure 3.11). On average, the OIC group still has a more restrictive investment ecosystem on FDI compared to the OECD average. Yet, disparities exist at the individual country level. For instance, a number of OIC countries still have certain sectoral restrictions on FDI and foreign investors. These restrictions not only create an unfavourable investment ecosystem but also give a negative signal that could deteriorate the perceptions of investors.

Figure 3.11: OECD's FDI Regulatory Restrictiveness Index Scores

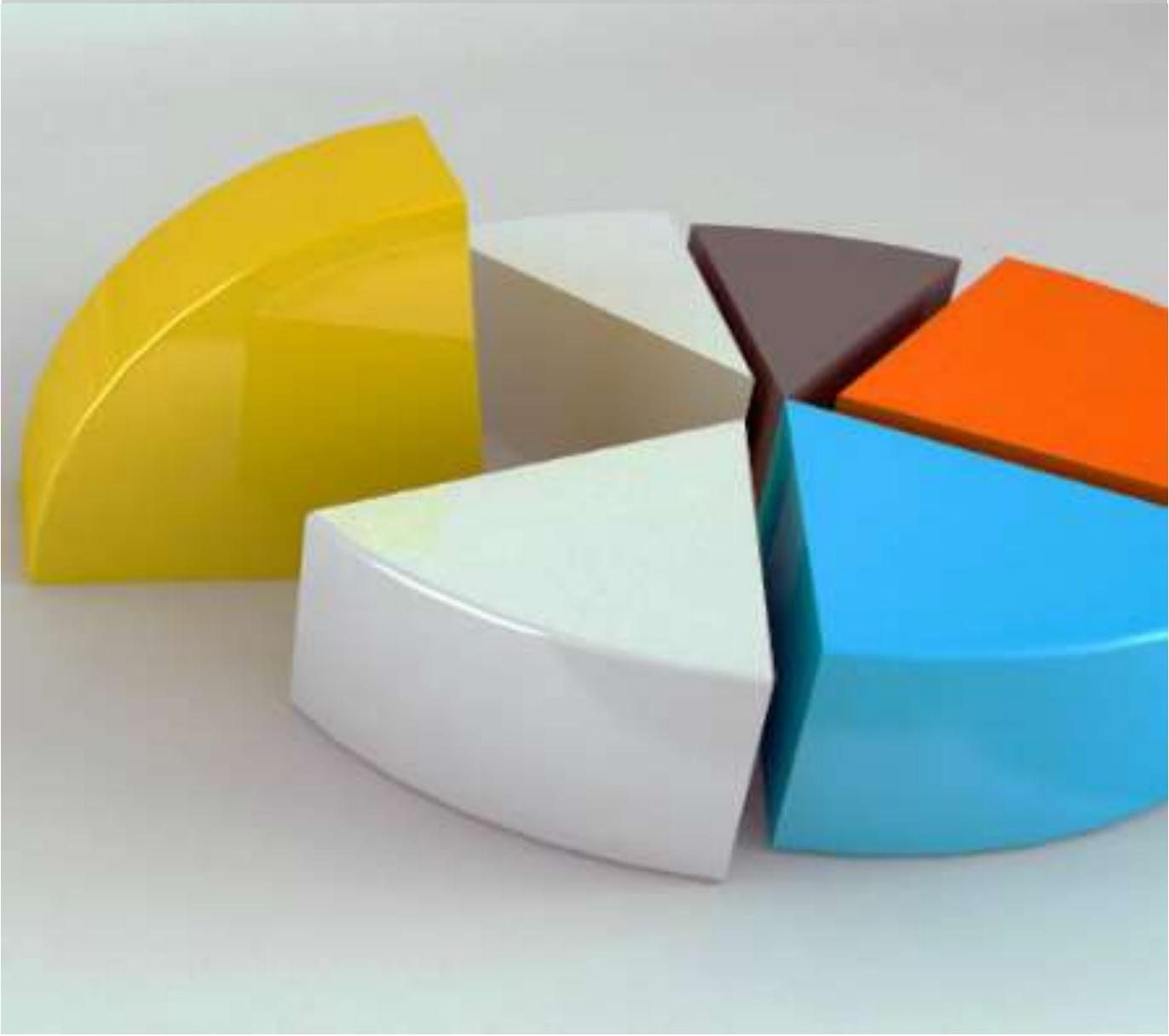


Source: OECD, 2022 Note: 0: open (no restrictions); 1: closed (high restrictions)

At the individual country level, Libya, Palestine, and Indonesia scored the highest on the FDI Regulatory Restrictiveness Index, reflecting the existence of strict regulations on FDI. On the other side, Albania and Türkiye were the OIC countries that provide a relatively favourable environment for FDI in 2020 in terms of regulations. The experience of these OIC countries with limited restrictions on FDI is important for other countries to remove existing barriers and reform their investment landscape to make it more investor friendly. In other words, intra-OIC cooperation could play an important role, especially through the exchange of experiences and national best practices on investment ecosystem reforms and upgrading of regulatory frameworks and legislations to address restrictive practices and policies.

PART II

INVESTMENT PRIORITIES AND OPPORTUNITIES IN THE SELECTED SECTORS



Even though investment in general is good for the economy, the extent of impact of investment on the economy varies depending on the nature, form, and targeted sector of the economy. For instance, investment in the manufacturing sector tends to generate a higher multiplier impact, with the potential for technological infusion, than many sectors with relatively lower value-added production capabilities. Investment in all sectors of the economy is desirable, however, the specifics of economic circumstances require that certain sectors be prioritized to achieve a more effective impact on the economy. It is therefore pertinent for policy makers to understand the dynamics of sectors of the economy in terms understanding the varying relevance of different sectors and the potential impact of their activities to the overall economy. It is also important to recognize the potential contribution of a sector in terms of its relationship to other sectors of the economy. A high-impact investment is one in which a significant quantity of the sector's output is distributed to other sectors after satisfying its own production needs as an intermediate input. Thus, the essence of inter-sectoral linkages is crucial in identifying priority sectors.

In accordance with the strategic sectoral impact analysis, a set of core sectors have been identified as having distinctive comparative advantages for OIC member countries. Four of these are productive sectors with natural or comparative advantage. These are Agriculture and Food; Textiles and Apparel; Mining and Construction and Petrochemicals, the last being the Islamic Financial Services sector. These key sectors have been identified through extensive research and analyses by the Islamic Development Bank (IsDB) as having significant value chain potential because of availability of requisite natural resources and enabling factors that could be exploited to increase the production of finished products and services that could enhance global competitiveness of OIC member countries. For instance, some OIC member countries are abundantly endowed with oil and gas resources such that they have a major influence on the global energy market, provide opportunities for petrochemical industry activities and form the basis for industrialization. Similarly, the OIC member countries possess vast arable land and favourable conditions for agriculture and food production, as well as factors conducive to the development of mining and construction industries, while the by-products of agriculture, oil and gas offer tremendous opportunities for the development of textile and apparel activities (Islamic Development Bank, 2020e).

4. Petrochemical Sector

4.1 Importance and Key Trends

The petrochemical industry accounts for over half of the world's chemical industry, contributing some US\$5.7 trillion (7.1%) to global GDP (including indirect effects), making it a key pillar of the global economy. As a capital-intensive industry, its demand for production machinery and equipment adds value to other sectors, and petrochemical production also stimulates the growth of secondary industries that depend on its supplies and innovations. Petrochemicals serve a global market. Dominated almost exclusively by the United States, Western Europe, and Japan until the 1970s, petrochemical production has since spread mainly to the Middle East and Asia, changing the competitive landscape to the point that OIC member countries have become major players in the global petrochemical industry.

Evolving global challenges and megatrends indicate that demand for petrochemicals is expected to grow and access to petrochemical feedstocks will become more competitive. This implies that despite a trend towards renewable energy, oil and gas resources will remain relevant. Therefore, instead of the expected radical and revolutionary innovations to replace fossil fuels, incremental process efficiencies and economies of scale to ensure cost competitiveness will remain the driving force of the global energy and petrochemical market, which is why petrochemicals are becoming essential.

The market potential for petrochemicals is huge, with an estimated value of US\$1.5 trillion, with the commodity chemicals component alone accounting for approximately US\$290 billion in 2018, with manufactured chemicals accounting for US\$1,000 billion. The petrochemical industry directly employs around 1.6 million people worldwide (Islamic Development Bank, 2020d).

Factors Driving Petrochemical Outlook

The key global trends that have a significant impact on the petrochemical sector are briefly presented below:

a) COVID-19 Pandemic

The coronavirus pandemic has altered global economic outlook, creating uncertainty in the short to medium term. The impacts of the pandemic whittled global demand for all goods and services in the short term. However, petrochemicals is a large global industry that is organized in complex value chains from oil and gas feedstocks in the production process of intermediate and final products found in cars, detergents, medical devices, among others. The wide variety of products coming out of the petrochemical industry makes this industry relevant in all circumstances. For example, even though demand for goods and services plummeted during

the lockdowns caused by the coronavirus pandemic, demand for some petrochemical end products used for medical materials remained strong. For instance, penicillin, artificial limbs, AIDS and cancer drugs, intravenous syringes and infusions, and insect repellents are healthcare products that rely on petrochemicals.

b) Population growth, 2020-2030

The world's population is growing rapidly, expected to increase from 7.8 to 8.6 billion by 2030 with more than 90 % of this growth coming from lower middle-income economies such as Nigeria, Pakistan, and India. Alongside with this demographic trend, the global economic boom of recent years, with global GDP doubling between 2000 and 2018, has contributed to the emergence of new markets. As the number of people on earth increases and economic activities expand, the demand for goods and services will be increasing. Petrochemicals are used in vast and different aspects of economic and social activities such as packaging, buildings, cars, electronic devices, textiles, detergents – in other words, in a wide range of products used by almost everyone.

c) Increasing Refining Activities

The share of refined oil in commodity chemicals has increased significantly over the past years, which has helped oil companies invest on more primary processing capacity. Second, the share of the circular economy with more recycled plastics is becoming increasingly important, and leading petrochemical companies are very active in driving this change. In the long-term, depending on the pace of recovery, OIC member countries should seize the opportunity to reach end-use industry markets and increase the cost efficiency to compete in the global market. To help them respond to this question, it is important to explore three levels of trends that principally affect and shape the petrochemicals industry: exogenous megatrends, industry-specific trends, and innovation/technology trends.

4.2 Current Status

Despite the extraordinary natural endowment of oil and gas resources and the potential for oil value-chain activities that could lead to the flourishing of petrochemical industry activities, oil-rich OIC member countries are net exporters of crude oil and gas while remaining net importers of high value-added petrochemicals that are obtained from the processing of crude oil refinery by-products. This situation has serious negative implications for investment in the sector, resulting in a lower contribution to economic growth than the sector's potential. By extension, the low productivity of the sector will affect other sectors of the economy and lead to a general slowdown in the growth of the economies of member countries with low value-added activities in the oil and gas sector. This causes member countries to lose many job opportunities that could have been created by the transformation of the oil and gas resources into petroleum and petrochemical products.

The petrochemical sector is of paramount importance to the world at large and OIC member countries have the opportunity to become more self-reliant and reduce their dependence on petrochemical imports by enhancing the value creation through primary and secondary processing stages and taking advantage of their unique access to petrochemical feedstocks such as oil and gas to create a large number of highly skilled jobs, with positive spill-over effects on education, governance and global industrial competitiveness. The Middle East, with significant oil and gas reserves, has become a world-class petrochemical centre. While OIC member countries own around 60 % of global oil and gas reserves, they contribute only 22 % of petrochemical production.

The petrochemical sector is proportionally more important for OIC member countries than for other countries: petrochemicals account for 1.8 % of global GDP while it contributes on average to 2.3 % of GDP of OIC member countries. In addition to the Middle East, other OIC member countries are increasingly participating in the global petrochemical industry. For instance, Indonesia and Malaysia are now recognized as petrochemical hubs in Southeast Asia, while also benefiting from their bio-based raw materials. As climate concerns raise questions about the long-term future of carbon-based fossil fuels and environmental degradation and sustainability, the need to explore viable alternatives to oil and gas will become increasingly important and urgent, hence access to bio-based resources that offer alternative opportunities, especially for the future. Many OIC member countries that do not have the advantage of having access to cheap raw materials will indeed have to adopt different and more diversified strategies. Türkiye is an example of an OIC member country that, even without substantial oil and gas reserves, has managed to attract several global specialty chemical companies and develop a domestic petrochemical industry by cultivating strong domestic demand.

OIC member countries, like other regions, play to their own strengths, taking an active role in petrochemical segments in which they are well able to compete. Some, like Saudi Arabia, enjoy cheap access to oil and gas feedstocks – a key requirement for success in this sector. Others, such as Türkiye, benefit from robust domestic demand in specific end-use industries and have developed strong on-the-ground secondary processing capabilities. The key question, then, is: How can each OIC member country extend its vertical integration to create more value in the future? Saudi Arabia's wealth of natural resources may have given it a head start in developing a core petrochemical sector. It is already deeply integrated in the production of all kinds of petrochemicals. Yet, other OIC countries recognize that significant value-added potential remains untapped (Islamic Development Bank, 2020d).

4.3 Key Challenges

The global petrochemical industry faces some challenges that could discourage investment in the sector, the key ones being as follows:

The first is the volatility of oil prices, which creates uncertainty for the petrochemical industry, especially for investors. As the global petrochemical market continues to grow, there is a need to increase long-term investments to meet the growing demand, which requires adjustments in supply chain activities. However, the volatility of global oil markets and the associated uncertainty pose a challenge to attracting the necessary long-term investments.

Second, there is an innovation gap in the sector, with the cost of innovation being relatively very high, mainly due to the asset-heavy nature of the sector. This has led to innovations in the sector, especially those related to chemical recycling, which requires significant investment in processing facilities. To cope with this challenge, companies are working to maximize capacity utilization in new and existing facilities. Moreover, these innovations tend to make significant assets redundant, negatively impacting the balance sheet of the petrochemical companies. Furthermore, with crude oil remaining relatively cheaper than renewable feedstocks and recycled materials, the high cost of feedstocks and processing will continue to favour the use of virgin petrochemicals, thereby discouraging innovation in the sector.

Third, is increasing global regulations on the use of petrochemical by-products, a challenge for the industry. For instance, plastic bag regulations are currently being imposed in 152 countries, ranging from regional plastic bag taxes (e.g., in two Malaysian cities) to a total ban on plastic bags in many West and Central African countries.

Many OIC member countries have much focused on producing basic chemicals and commodity petrochemicals, but considerably more value is added through secondary-processing to produce engineering plastics and specialty chemicals. Deeper integration along the value chain and a broader product portfolio will increase value creation for member states in the future. It is estimated that 50 % of the value creation in current US\$1.5 trillion market for formulated petrochemicals comes from the production of finished chemicals, while the production of basic chemicals, which is a key sector in several OIC member countries, contributes only 20 % of the total value creation. As a result, while OIC member countries possess 59 % of the world's oil and gas reserves, they contribute only 22 % of petrochemical production, highlighting the fact that OIC member countries have yet to unlock significant value creation potential due to the high value of petrochemicals.

4.4 Investment Opportunities

Even though the coronavirus pandemic affected petrochemical demand in 2020 compared to 2019 due to weaker downstream oil and gas activities, demand for petrochemicals rebounds in 2021 and the industry is projected to grow in the long term to surpass US\$2 trillion by 2030, driven by increasing income levels and a global population growth (IMF, 2022).

While certain countries are global leaders in the petrochemical industry, others are in the early stages of industrial development. Tailored strategies need to be implemented to increase petrochemical value creation across all OIC member countries.

- "Domestic formulators," which do not yet have a significant petrochemical industry, must address infrastructure deficits, streamline bureaucracy, improve qualifications, and attract foreign cooperation partners to grow this industry.
- "Dormant potentials" benefit from access to feedstock, but their petrochemical industry remains underdeveloped – they must address governance issues and improve access to FDI to boost domestic demand in relevant end industries.
- "Rising stars" are established regional players that can play the innovation card, building on an already solid infrastructure to foster sustainability and curbing export volumes to increase domestic demand.
- "Demand leaders" face the challenge of increasing the share of petrochemicals in their sizable economies –improving workforce qualifications would stimulate job creation and help scale up this industry and access to finance (e.g., recommendations for financing instrument).
- As the petrochemical industry depends on state-of-the-art infrastructure, the current infrastructure gap in many OIC countries must be bridged by an integrated approach both at the national and donor level, with the support of international donors such as the IsDB.
- Since the petrochemical industry is determined by end industry demand, the stimulation of the latter by global industrialization strategies will indirectly attract the petrochemical industry, for which the proximity to end industries is an important factor.
- OIC member countries need to improve training for quality jobs and tailor courses to the petrochemical industry's need for highly skilled employees.
- In the face of growing awareness of sustainability issues, OIC member countries can gain a competitive advantage by promoting innovation through partnerships and becoming forerunners in the sustainable and innovative petrochemical industry.
- Closer collaboration among OIC member countries can bring mutual benefits across these countries by connecting and interweaving their industrial value chains.

Prospects from Selected End-User Petrochemical Products

Despite the growing global environmental and sustainability issues to control oil extraction and processing and activities to mitigate the effects of climate change, the extensive use of petrochemical products in the context of population growth and improved economic activities, the demand for petrochemicals will remain strong. Petrochemicals are significant components of manufacturing activities, with five end-use industries alone accounting for around 75% of the global plastics market. The outlook for the petrochemical industry is further enhanced by the positive outlook for the key end-user industries and markets, namely packaging, automotive, electronics, textiles, and construction.

a) Packaging

Revenue in the packaging industry is projected to grow by 3.3% annually by 2024, largely due to rising global consumer demand. Market saturation in developed economies means that future developments must be considered to add greater value. In developing economies, demand for packaged goods is increasing, but packaging must remain affordable and functional. The petrochemical industry needs to balance the growing demand for commodity and higher-value plastics with the increasing interest in sustainable and renewable products. Sustainability will lead to less packaging per unit and, hence, less petrochemical content per unit, though this should be offset by overall volume growth. Packaging solutions must become more sustainable and new processes/innovative resins must improve recycling efficiency. The growing demand for renewable packaging feedstock will favour OIC members that have access to this feedstock.

b) Automobile

Annual revenue growth of 3.3% is expected through 2024, buoyed by demand for new technologies and fuel efficiency in developed markets, and rising disposable income (and growing demand for automobiles) in developing countries. In today's mature automotive industry, strong growth opportunities require heavy investment in five trends: mobility services, autonomous driving, digitalization, electrification, and lightweighting. Mobility services are forecast to account for 10-25% of OEM revenue by 2025, based on estimated consumer spending of US\$ 1.3 trillion. Demand for polymers will increase in line with the expected growth of the automotive industry. At the same time, replacing steel with plastics and increasing the plastic content per vehicle can cost-effectively address the light weighting trend. Engineered plastics also add considerable value to OEMs and will find their way into cars in all price brackets.

c) Electronics

Rising consumer spending is expected to drive revenue growth of 2.7% annually over the next three to five years. This trend correlates with fast-rising incomes coupled with relatively low product penetration in regions such as Southeast Asia. The increasing use of the Internet worldwide and the ever-increasing number of mobile phone subscriptions will account for much of this growth. The positive outlook for electronics will allow demand for petrochemicals to continue to grow healthily, especially as plastics currently have virtually no viable substitutes in electronic devices. Conversely, streaming services have taken over from CDs and DVDs and show how digitalization can negatively impact the petrochemical sector. The widespread long-term growth of mobile devices, however, will continue to drive volume (and possibly innovation) in petrochemicals. Saudi Arabia and Iran are currently the only OIC member countries that provide PC production capacity in the world (6%). Yet the Middle Eastern region remains a net exporter of PC resins.

d) Textiles

Global population growth and rising disposable income expected to increase textile revenues by 3.5 % annually through 2024. Offshoring to low-wage countries will continue in the short/medium term, after which more textiles will be manufactured closer to their target markets – reducing both tariffs and time to market. Although technical innovation will continue to drive automation in production, employment in the textile sector will continue to grow strongly in the years ahead. Demand for synthetic fibers will increase in line with the forecast growth in the textile sector, but also due to lower costs and more stable prices than cotton, in particular. The nascent trend toward smart fabrics will reinforce demand for polyester (PET) and nylon (PA) fibers. Innovations in these fibers are expected to improve recycling capabilities in response to sustainability concerns, although some players may follow consumer preferences and shift back to natural fibers.

e) Detergent

The increase in the world's population and the expectation of continued growth in per-capita disposable income will lead to a 2.8% increase in consumer spending on household goods (including detergents) over the next few years. Demand for convenient packaging ("pods") is also rising sharply, as is the share of concentrated liquid detergents (especially in Western Europe). The growth of the detergent industry will sustain the increasing demand for essential petrochemical components, subject to the influences of the trends described above. However, sustainability awareness will force producers to come up with formulations that use less water, permit lower wash temperatures and are less harmful to the environment. This will change the type of surfactants needed, which will drive innovation in the petrochemical industry. Low oil prices would benefit the petrochemical aspects of the detergent industry, but rising oil prices could push demand toward natural-based surfactants.

f) Construction

All construction segments appear poised for substantial growth through 2030: housing (driven by population growth and urbanization), non-residential buildings (driven by industrialization) and infrastructure (driven by economic development). Smart technologies and energy efficiency will also occupy the sector worldwide. This ongoing growth, flanked by sustainability concerns, will stimulate more demand for high-performance petrochemical-based building materials (e.g. protective paints and coatings, insulation materials such as PU foams). However, given the significant population growth in sub-Saharan Africa and Asia, petrochemical players must rethink their footprint and proximity to the market: Indonesia, Nigeria, Pakistan, and Bangladesh will all rank among the ten most populous countries by 2030 and have the potential to become significant manufacturing hubs.

g) Base Chemical

The global commodity chemicals market volume of around 515 million tons in 2018 was valued at around US\$290 billion. A generally conducive market environment and rising

downstream demand are expected to sustain annual value growth of 4% in the coming years. This increase will likely be shared between Asia-Pacific (notably China), the United States and Middle Eastern countries with access to oil. Olefins account for roughly 60 % of total commodity chemical demand.

Feedstock refining, base chemical production and secondary processing are often integrated at a single site, making the global supply landscape homogeneous at all three levels. International trade in base chemicals is limited. Extraction and primary processing together account for about 30 % of total value creation. Secondary processing, which is less capital-intensive but requires greater technical and product expertise, adds about 70 % of the total value. The most important end industries for this value chain packaging, construction, automotive, electronics and textiles – account for around 80 % of total demand for basic chemicals.

OIC member countries are already key players in the global base chemical value chain. In Saudi Arabia, Aramco and SABIC are global leaders looking to further strengthen their global role. Some 20 to 25 % of the world's base chemical production capacity is located in the Middle East, with Indonesia and Malaysia also benefiting from access to natural gas. OIC member countries consume most of the base chemicals they produce domestically, with a slight focus on high-volume applications in packaging and construction. OIC member countries need to invest more in cutting-edge technologies to maintain their global cost advantage and curb the risks posed by bio-based feedstock. Further vertical integration can strengthen their role in the global petrochemical value chain. And for countries with limited access to oil and gas, it may be worth exploring the potential of bio-based petrochemical feedstocks.

h) Polyethylene (PE)

The global PE market totalled approximately 100 million tons in 2018 and is expected to grow at 3.8 % annually through 2030. It is partly driven by the growing demand for low-cost plastics in emerging countries, with stronger growth in Asia Pacific (6%) but lower growth in the Americas (3%) and EMEA (2%). The HDPE type is expected to grow at the fastest CAGR (compound annual growth rate) of 4.6 % through 2030. The global PE value chain can be broken down into three stages. Ethylene is first produced from oil or gas (accounting for 27-29% of the total value), then processed into resins (45-47%). Secondary processing then gives the resins into their final form (25-27%). Extraction and primary processing are heavily concentrated in the hands of a few key players, including IsDB-based corporates such as SABIC. By contrast, secondary processing is heavily fragmented and largely beyond the reach of IsDB players. Though the total PE volume has nearly doubled in the last decade and almost 50% is traded internationally, there are regional imbalances: The United States has excess capacity, but Latin America and Asia need imports to cover supply shortages. China is the largest importer and Saudi Arabia the largest exporter in the world.

OIC member countries are well integrated in the upstream feedstock supply and the refining/production process. Yet, they cover less than 10 % of the global market for higher value-added secondary processing. Their position in the global value chain also varies

geographically: Middle Eastern members account for 80 % of the OIC group's total PE footprint, with Saudi Arabia alone responsible for nearly 50 % of the total PE capacity of OIC member countries. Central Asian OIC member countries have an initial footprint in ethylene and PE production, with Indonesia and Malaysia being important regional players. Here, significant recent investments in access to natural gas could reduce dependence on imports (Islamic Development Bank, 2020). While the OIC member countries are currently well placed as net exporters of PE, China and the United States are planning to increase capacity.

OIC member countries need to review their position in the global PE value chain to see how they too can enlarge their share of available capacity. They must also foster investment in secondary processing by attracting end-use industries (packaging, construction and automotive) to enhance local value creation at all relevant stages of PE value chain and make future capacity expansion more self-sustaining. Iran, Egypt, Oman, Azerbaijan, Kuwait and Malaysia have already announced plans to build more than 30 new plants over the next 3-5 years. These investments will certainly help keep OIC member countries in the global loop. If other members follow suit, it could strengthen their position in the highly competitive global PE market. New technologies such as coal/methanol to-gas and new PE applications can also create opportunities, even for entrants to this market.

i) Synthetic Rubber

Synthetic rubbers are forecast to grow by roughly 6 % annually due to continued strong demand from the automotive industry and favourable macroeconomic trends, such as population growth and rising incomes in developing countries. Currently, the participation of OIC member countries in synthetic rubber is limited to about 5 % of the global production capacity. The emerging automotive industry in OIC member countries could foster the growth of synthetic rubber production while also boosting countries with good access to natural rubber. Recycling remains a key challenge for the rubber industry.

The synthetic rubber market is projected to grow at approximately 6 % annually through 2030. With automotive demand remaining strong alongside a range of non-pneumatic applications in many end-use industries, synthetic rubbers are increasingly preferred over natural rubbers despite the sustainability trend. Asia Pacific, North America, and Europe accounted for 84 % of the world's rubber market in 2018 while the Middle East account for a 9 % share.

Many leading producers of the raw materials used in the production of synthetic rubber are integrated upstream in the access to raw materials. Various companies from OIC member countries are involved in the synthetic rubber market, contributing about 25 % of the total value creation. Sustainability awareness and recycling issues are gaining traction in the rubber market. While superior material properties and lower processing costs have lately favoured synthetic over natural rubber production, oil price volatility will continue to dampen this trend.

Within the OIC member countries, access to oil has enabled Iran and Saudi Arabia to enter the synthetic rubber value chain. Indonesia and Malaysia are the world's leading producers of

natural rubber and can benefit from a shift to natural rubbers if oil prices rise. Sugar-producing OIC member countries could also benefit from the advance of bio-based raw materials. Recycling of finished products in general – and tires in particular – remains a major challenge in the rubber market. As regulation of tire combustion and disposal tightens, new technologies could advance recycling and are currently being piloted by players such as Green Distillation Technologies in Australia. Converting rubber tires to bio-oil and carbon could also be a recycling pathway for some OIC member countries.

Way Forward

It is imperative for OIC member countries to prioritize investments for the development of the petrochemical industry, which requires substantial capital expenditures as well as effective coordination to establish link with the global value chains of many other end-user industries. The OIC member countries with strategic advantage for the petrochemical industry need to formulate a roadmap for a collaborative network of private and public entities at the OIC level to create the required market size and foster opportunities for thriving end-use industries. This in turn will drive innovation in the petrochemical and other industries. By adding greater value in these high-impact industries, oil-producing countries will collectively be able to move toward technology development, while diversifying and expanding their product portfolios.

The petrochemical industry is and will continue to be of great importance to OIC member countries. The first step into petrochemicals requires substantial investments and a long-term asset strategy, so establishing a significant footprint in this industry takes a long time. Nevertheless, we see attractive opportunities for many OIC member countries to develop their petrochemical sector by leveraging domestic and/or imported feedstocks. Countries such as the United Arab Emirates, Qatar and Malaysia are already heading in this direction. By further diversifying their processing capabilities, these and other OIC member countries will be able to add even more value.

By fostering domestic demand and attracting end-use industries such as construction, packaging and automotive, OIC member countries can also ramp up their local formulation and finishing capacity – reducing dependency on imports at the same time. It is clear that OIC member countries currently have strengths in primary production and processing. However, there is considerable potential for added value lies further up the value chain, especially at the secondary processing stage, where they are currently weaker.

Logically, OIC member countries need to make efforts to diversify and deepen their level of vertical integration and stimulate sufficient demand from end-use industries to advance this development. This requires the formulation and implementation of proactive policies to foster growth, innovation, value creation, employment, sustainability, and equality in all member countries. OIC member countries are a serious player, controlling 20% of the world's production of basic chemicals – they also have a significant share of primary processing, but could do better on secondary processing and by diversifying into specialty chemicals.

- Demand for base chemicals is expected to increase until 2030, driven by the favorable prospects of the relevant end-use industries and downstream petrochemical production – OIC countries with feedstock access can tap into this potential.
- To add to their cost advantage over the U.S. and China, OIC member countries should explore opportunities in technological upgrading, such as converting crude oil to chemicals.

5. Textile and Apparel Sector

5.1 Importance and Key Trends

The worldwide textile and clothing industry market had a retail market value of US\$ 2.2 trillion in 2018 and is expected to increase at a CAGR of 3.5 % to reach US\$ 3.3 trillion by 2030 (Islamic Development Bank, 2020b). In the future, demand is projected to be driven by population growth, increased disposable income, and rapid urbanization in developing countries. The global textile and apparel industry is estimated to account for around 2% of global GDP.

The textiles and apparel sector is often a key driver of a country's long-term national and economic development. Because of its low fixed costs and emphasis on labour-intensive manufacturing, the sector is often considered a start-up industry. As the industry grows, it serves as the foundation for more technologically advanced industries.

The coronavirus pandemic has wreaked havoc on public health and thrown the global economy into disarray. Aside from health-related issues, the widespread use of containment and quarantine measures, as well as the sudden halt in global mobility, has resulted in the closure of retail outlets and the suspension of the manufacturing of various goods and services around the world. Because of its labour intensity, the preponderance of low wages, and the major role of developing countries in the production process, textiles and apparel is one of the industries most affected by the coronavirus epidemic. As a result, the complex networks of the global textile and apparel value chain may need to adjust to these shocks in order to be more resilient. This external shock to the Textile and Apparel sector will accelerate the pace of change brought on by global megatrends, industry-specific trends, and the shift to technological innovation.

In the medium to long term, countries and businesses that can adapt quickly to these changes will benefit the most. In this context, there are many opportunities for OIC Member Countries to reposition themselves in the Global Textiles and Apparel Value Chain, become more competitive in the global market, and support their socio-economic development by increasing value-added of their economies and creating job opportunities.

As explained in Table 5.1, the global economy has experienced an external shock due to the coronavirus pandemic and an unprecedented public health crisis. Consequently, the external shock to the textile and apparel sector will accelerate the pace of change brought on by global megatrends, sector-specific trends, and the shift to technological innovation. In the medium to long term, nations and businesses that are able to adapt quickly to the trends described below will benefit the most.

By 2030, the world's population is expected to reach 8.6 billion. As a result, over the next ten years, the textile apparel industry is anticipated to rise by 3.5%.

Approximately 60% of the world's population will reside in cities by 2030, up from 56% today. This development is anticipated to have a series of effects on the textile and clothing industries in OIC member countries. First, access to large numbers of workers with various capabilities will be facilitated in metropolitan regions. Second, large cities with a concentration of people of diverse skills can support innovation clusters. Finally, urbanization will increase the need for small stores and change the business model of the stationary retail industry.

While it is widely accepted in scientific circles that human activity contributes to climate change, the precise regional effects might vary greatly. Increasing knowledge, stricter regulations, and more rigorous enforcement are anticipated to have a significant impact on the industry, particularly on resource-intensive phases such as finishing.

Beyond the global megatrends mentioned above, a number of trends specific to the textile and clothing industry will also impact the continued development of the sector.

Footprint and market structure

China is a major supplier of textiles and apparel, accounting for more than 30% of global exports. However, rising wealth is expected to drive up labour and production costs in China, forcing the outsourcing of low-value-added manufacturing stages to neighbouring countries such as Bangladesh and Indonesia, both of which are OIC members. Large businesses will also seek to reduce their dependence on China by diversifying their production activities.

Strategic partnerships

Brands are required to form strategic alliances with bigger, more capable first-tier suppliers to meet increased demand and reduce lead times. By accelerating data flow between the design, testing, and production phases and enhancing transparency, digitalization will considerably improve the effectiveness of these strategic collaborations. Staffing requirements will change as a result of digitalization, moving beyond simple sewing to include monitoring more complex machine modules.

External network effects

It is expected that the competitiveness of textile and clothing producers will be further affected by external networks, particularly in OIC countries. Local governments will need to work with the industry to ensure that the required infrastructure is put in place, provide financial subsidies for investments like machinery upgrades, and implement efficient tariff policies and bilateral free-trade agreements to encourage exports and stabilize demand. Special economic zones and export processing zones could thus become more significant. Additionally, the sector could benefit from increased collaboration with external stakeholders.

Corporate social responsibility

Corporate social responsibility will be further fuelled by the enthusiasm of younger generations for social and environmental issues, as well as their growing desire to comprehend the impact of their fashion choices. All participants in global value chains, including manufacturers in **OIC countries**, are required to assess the level of sustainability and environmental impact of their goods and manufacturing practices. This will create the foundation for innovation in the textile and clothing industry to increase resource efficiency and recycling possibilities. All GVC members are expected to make investments in the following activities.

Digitalizing customer shopping experiences

Technology is rapidly transforming the way consumers interact with brands, obtain information, and purchase their favourite products. Retailers are increasingly using cutting-edge social media-based communication strategies. By facilitating two-way communication, customisation, and trust, these media are radically changing the relationship between brand and consumer. The potential for sales growth in the textile and apparel industry will come from social commerce, or the act of purchasing goods directly through a social media messaging or application.

Table 5.1: Global Trends Shaping the Textiles and Apparel Industry

Trends shaping the textiles and apparel industry		
Innovation and technology trends	<ul style="list-style-type: none"> • Technology innovation • Material innovation 	IMPLICATIONS Create concrete investment opportunities
Industry-specific trends	<ul style="list-style-type: none"> • Footprint & market structure • External network effects • Strategic partnerships • Corporate social responsibility • Digitalizing customer shopping experience 	Drive business strategy
Global megatrends	<ul style="list-style-type: none"> • Population & textile/apparel demand • Urbanization • Environmental awareness 	Set economic framework

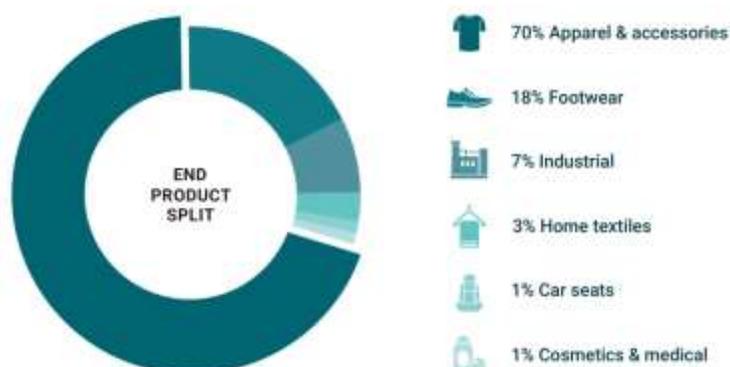
Source: Islamic Development Bank (2020b).

5.2 Current Status

The OIC has identified a list of key industries in which its Member Countries have significant competitive advantages. They are among the world's leading textile and apparel

manufacturers and play an important role in the supply of raw materials and at various stages of the global value chain (GVC).

Figure 5.1: Outlook of Textiles and Apparel Sector in OIC Countries



Source: Islamic Development Bank (2020b).

For several OIC member countries, industry is crucial. Therefore, they are essential in providing raw materials and industrial sites to global companies. OIC member countries account for 15% of the US\$ 190 billion global market for raw materials such as cotton and wool, as well as 15% of the US\$ 807 billion global textile and apparel export market. Apparel and accessories are the largest categories of end-use products, accounting for 70% of total value (Figure 5.1) As a result, the textiles and apparel business has a significant impact on the economy, jobs, the environment, and investment.

The exact stage of the procedure and level of involvement can differ significantly from state to state. Uzbekistan, Turkmenistan, and Sudan, for example, produce mainly raw materials but seek to boost the value added of their domestic textile industry. In terms of raw materials, OIC member countries account for 25% of the world's cotton production, 26% of the world's wool production, and 15% of the world's raw leather production. Eight of the top 15 cotton-producing countries in the world are OIC members. Pakistan and Türkiye not only enjoy abundant supplies of raw resources, but their value chains are also becoming increasingly vertically integrated as they process textile fibers into finished products. Bangladesh, on the other hand, is a well-known garment producer that imports raw materials before turning them into T-shirts and sweaters. It is the world's second largest exporter of apparel, accounting for 7% of all apparel exports.

5.3 Key Challenges

The textile and apparel industry faces a unique set of challenges by its very nature. The ramifications and potential remedies for four major challenges are examined in this section.⁶

- a) First, in many low-cost production countries, basic labour regulations are not properly enforced, including working hours, wages, and safety requirements. Following a succession of catastrophic cases, many governments have begun to monitor workplace standards more closely. However, the majority of observed incidents are still caused by structural flaws, followed by fires. Countries with only limited enforcement of regulations may continue to struggle to maintain strong working standards. Child labour and forced labour remain a problem. Digitalization and automation are expected to improve working conditions while reducing workplace accidents and health risks. Equal access to workers' rights, training, and social security for all employees will be increasingly crucial.
- b) The second major challenge for the textile and apparel industry is waste. It is estimated that more than half of fast fashion apparel is thrown away within a year of purchase, a trend that is expected to continue. Recyclable materials and more circular business models may help reduce the amount of textile waste and its environmental impact in the future.
- c) The third challenge is the secondary market for used textiles in Africa. Local producers and retailers are increasingly concerned about this, as their own production and brands are unable to compete with low-cost second-hand textiles. Combating the secondary market will require active industrialization and the development of a skilled workforce.
- d) A fourth challenge is the sensitivity to the global economy, which has been affected by a succession of events. First, recessions and financial crises have a direct effect on supply and demand throughout the value chain. Second, the recent trade war between China and the United States has demonstrated the importance of bilateral free-trade agreements in stabilizing or expanding trade between countries. Third, global health disasters are gradually affecting the interconnectedness of the world economy. Preparing for such eventualities – for example, by diversifying the value chain – can help prevent disruption.

⁶ The synopsis of the challenges have been greatly educated by Islamic Development Bank report: “Realizing Opportunities for the 21st Century Through Resilient Global Value Chains: Textiles & Apparel. The Future Volume 5”.

5.4 Investment Opportunities

The IsDB selected multiple sectors as a foundation for examining the potential, opportunities, challenges, and risks of the textile and apparel industry (IsDB, 2020). Cotton, wool, silk, leather, and synthetic fibers are among the five GVCs that were selected for further study.

To be included in the GVC for sustainable cotton growing and processing, OIC countries that are not yet well-established in the cotton business should invest in infrastructure and increase their knowledge. As for exploiting the opportunities in the global wool market, they can focus on maintaining and developing their position in the long term. As for the silk market, growing consumer demand and product innovation can offer OIC countries interesting prospects to occupy untapped market niches. In the leather industry, OIC countries might could emerge as the leading suppliers of leather bags and accessories, the fastest growing market segment. They would also need to develop the necessary processing infrastructure. In the synthetic fiber sector, OIC Asian countries could benefit from the lure of direct investment by global sourcing companies as well as investment in local capabilities to create a local supplier infrastructure. Last but not least, local supplier networks could encourage production for the domestic market and reduce dependence on exports.

According to the analysis (Islamic Development Bank, 2020b), some industries in the textile and apparel sector have distinguished themselves in some OIC markets:

- Cotton is the most frequently utilized natural raw material in the worldwide textile and apparel sector, making it particularly essential for investors. In 2018, OIC member countries contributed more than 25% of global production, with Pakistan, Uzbekistan, and Türkiye producing the most cotton.
- Wool is one of the most traditional raw materials used in the textile and clothing industries. It is extremely important for the economy of OIC member countries, particularly Morocco, Iran, and Türkiye, as the leading producers in the group, with a share of around 26% of global production in 2018 - the highest of any value chains in this industry.
- Silk has a lot of potential in terms of growth, with a projected CAGR of 8% between 2016 and 2021. Uzbekistan is the largest producer among OIC member countries, placing in the top three internationally, followed by Iran and Afghanistan. Each country already has development programs in place to increase production. Innovation, such as spider silk, has the potential to reshape the landscape, opening significant opportunities for investors in OIC member countries.
- Both the footwear and luxury garment industries rely heavily on leather. In 2015, OIC member countries produced over 15% of the world's raw leather, with Sudan, Pakistan, and Uzbekistan being the top producers. There is space for value addition, particularly in terms of processing infrastructure expansion.
- Synthetic fibers are a powerful source of forward-looking growth in apparel and home textiles due to their competitive prices and desirable performance qualities such as

strength and flexibility. The market value of synthetic and cellulosic fibers is expected to grow at a rate of 4% per year between 2018 and 2030. Currently, OIC member countries account for 7% of global production, with Indonesia accounting for 3% of global production and Türkiye accounting for 2%.

Established market champions in the OIC region

Three relevant clusters were identified in the OIC region through the IsDB approach, namely:

- Established market leaders are dominant players, accounting for 20% of the IsDB's export value in textiles, garments, skins, and leather goods.⁷
- Emerging stars account for 10% of IsDB export value in textiles, garments, skins, and leather items, and have high growth objectives.
- Under Promising potentials, new market entrants with a low starting point are listed (see Figure 5.2).

Figure 5.2: Clusters in the Textile Apparel Sector in the OIC Region

Established market champions

Bangladesh
Türkiye

Emerging stars

Indonesia
Pakistan

Promising potentials

Egypt
Morocco
Tunisia
Azerbaijan
Kazakhstan
Kyrgyzstan
Malaysia
Uzbekistan
Albania
Jordan



Source: Islamic Development Bank (2020b)

Note:

The IsDB export value for textiles, garments, skins, and leather products is dominated by a small number of **well-established market** champions, each accounting for 20% of the export value. For instance, Bangladesh is the leader in the OIC region in terms of textile and apparel

⁷ A detailed discussion on Türkiye and Bangladesh is presented in the Annex III.

export value and is continuously improving its capabilities to produce increasingly complex product categories.

Emerging stars, which currently account for 10% of the export value of textiles, garments, skins, and leather goods, have high growth aspirations. With full coverage of the GVC, which includes raw materials like cotton as well as primary and secondary processing, the country is a significant player in the sector.

Promising potentials include new market entrants with low starting point. For instance, Uzbekistan and Egypt experienced double-digit export growth rates between 2017 and 2018, despite having less than \$5 billion in exports each year.

6. Agriculture and Food Sector

6.1. Importance and Key Trends

Agri-food has become a vast global business with activities ranging from agriculture to secondary processing, from small subsistence operations to giant corporations, in addition to its apparent function of feeding humanity. As a result, it has a significant impact on the economy, employment, investment, and the environment as a whole. It also plays a crucial role in fulfilling several of the United Nations' Sustainable Development Goals (SDGs), ranging from fighting poverty and hunger to aspiring to decent work and economic growth, to promoting diversity and gender equality.

However, with the world's population expected to grow from 7.6 billion in 2022 to 8.6 billion in 2030 and 9.8 billion in 2050, increasing agri-food production is essential to avoid food scarcity (Islamic Development Bank, 2020c).

Today, in most developed economies, agriculture has become a mechanized, technology-driven activity. Some crops are genetically modified before they are planted to make them resistant to herbicides and insect infestations, and planting, watering, fertilizing, and harvesting are all automated and controlled using cloud-based data. However, this is not the case in less developed countries, where farmers still rely heavily on human labour and pesticide use. This means that over the next decade, there will be plenty of challenges in bridging innovative technology gaps in the agricultural industries of developing economies.

Improved integration of automated technologies can increase the efficiency and productivity of a wide range of agricultural tasks. Robots and self-driving cars are two examples of the possibilities that these technologies can provide. Similarly, digitalization, big data, and artificial intelligence will impact the entire food value chain. Smart and precision farming, which uses automated technology and big data, will boost market expansion in the coming years by optimizing growth and yields.

Since early 2020, the coronavirus pandemic and the Great Lockdown have caused unprecedented disruption and uncertainty in the global economy. The world has not been equipped to deal with a disruption of supply and demand in agriculture and the food sector. In the year 2020 alone, the annual food deficit of OIC member countries amounted to US\$ 67 billion (Islamic Development Bank, 2020c).

The pandemic and lockdown have demonstrated to the world that the agri-food industry, like many other industries, is interdependent in complex value chains from input to output, and that the risks posed along the value chain necessitate countries and policymakers to take action to build a resilient agri-food value chain.

Over the past few decades, agribusiness has evolved into an automated, technology-intensive industry. However, by 2030, the agri-food business will need to undergo a significant transformation. Three broad dynamics are driving this transformation: rising food consumption, rising consumer expectations, and resource depletion. Simultaneously, industry-specific developments, as well as technical and other breakthroughs, could facilitate the transition (Table 6.1).

Table 6.1: Key Trends Shaping the Agri-Food Industry

		IMPLICATIONS
Technology and business model innovation	♣ Genetic engineering	Create concrete investment opportunities
	♣ Mechanization & automation	
	♣ Digitalization & big data	
	♣ Alternative farming & “agriculture”	
	♣ Regenerative farming	
Industry-specific trends	♣ Regulations	Drive business strategy
	♣ Value chain integration	
Megatrends	♣ Food demand	Set economic framework
	♣ Consumer requirements	
	♣ Resource depletion	

Source: Islamic Development Bank (2020c)

6.2. Current Status

The 57 countries that make up the OIC include many of the fastest-growing economies in the world. The GDP of the OIC members is estimated to be around US\$ 7 trillion. The economies of OIC Member Countries have significant potential to increase their market share in the global economy, with GDP growth rates of up to 8% per year.

Recent analysis by the Islamic Development Bank Group has identified a group of key industries in which its members have specific competitive advantages. One of these is agriculture, where OIC Member Countries have enormous potential to become world leaders in the production and processing of grains, horticultural, and meat. Agriculture is recognized as a key engine for growth and a pathway to national transformation through socioeconomic development. However, because OIC members have focused on production, the true value of agriculture in OIC Member Countries remains largely untapped. As a result, countries are experiencing nascent primary and secondary processing, and OIC Member Countries are not taking advantage of the potential for higher value generation.

In 2018, agri-food contributed US\$ 650 billion to the GDP of the 57 OIC member countries. It accounted for up to 57 % of GDP (Guinea-Bissau) and up to 71 % of total employment (Djibouti) in some of the region's smaller economies, while these statistics are lower for more

advanced countries with diversified economies (such as Türkiye). In sum, OIC member countries account for over a quarter of the world's population, 9% of its GDP, and 21% of its gross value added in the agricultural sector.

OIC member countries are located in some of the most fertile regions of the world, providing customers around the world with essential items and everyday luxuries such as coffee and chocolate. OIC countries have managed to build competitive niches as a result of their geographical location and soil quality, resulting in limited competition among members. For example, Côte d'Ivoire is the world's largest producer of cocoa, accounting for almost 40% of worldwide production, yet Indonesia is the world's fourth largest producer of coffee, and Uganda is the tenth largest. Indonesia is the world's largest producer of palm oil, followed by Malaysia. Together, these two countries produce about 85% of the world's production. Meanwhile, Türkiye is the world's largest exporter of hazelnuts, while Azerbaijan ranks fourth in terms of hazelnut exports.

To examine the potential opportunities and challenges in the agri-food sector, the IsDB has selected 18 core industries, five of which were identified as being of particular relevance to OIC member countries: cocoa, palm oil, rice, fish, and poultry.

The dominant position of OIC countries as cocoa growers gives the industry a unique significance. Côte d'Ivoire, Indonesia, Nigeria, and Cameroon account for two-thirds of the world's cocoa bean crop and four of the top five producers. Member countries have significant potential to work in multiple links of the value chain, including in secondary processing, where they are still under-represented, thanks to their strengths in production and primary processing.

By 2030, the palm oil business has enormous growth potential. The top two manufacturers, Indonesia and Malaysia, demonstrate the OIC's dominance in the global market. However, in order to stay afloat, the sector must move away from unsustainable cultivation methods.

Rice is a staple crop in OIC member countries, providing both nutrition and employment. The potential for disruptive developments such as aerobic rice cultivation is currently being explored in the context of increasing water constraint.

Indonesia is already the second largest fish producer in the world. However, the expansion of aquaculture and new technologies that will change the current market dynamics while improving sustainability suggest that other OIC countries should also be interested.

Poultry production in OIC member countries has a lot of room for expansion, thanks to rising local demand. A Saudi Arabian player is ranked the ninth best producer in the world. As demand for processed ready-to-eat or ready-to-heat poultry products rises, new consumer trends will have an impact on the processing stages.

6.3. Key Challenges

According to the United Nations Food and Agriculture Organization, two billion people worldwide are severely or somewhat food insecure.

Agri-food, by its very nature, presents a unique set of obstacles when compared to other industries. This section addresses three important aspects:

i) Rural Exodus

First, OIC countries are witnessing an almost widespread exodus from rural areas and manpower shortages as a result of rising urbanization, water scarcity, and land degradation. (Islamic Development Bank, 2020c). The disparity between farm revenues and city salaries, as well as the difficult working conditions and risky operating model inherent in a seasonal, highly volatile enterprise like farming, are driving this migration, which is common in developing economies experiencing rapid urbanization. Because of these concerns, many farmers have decided to relocate their family to urban areas. Meanwhile, because farmers lack the resources to invest in technology, inputs, and know-how, output productivity has remained stagnant. This further erodes the attractiveness of the agricultural sector for the next generation. Food shortages and increased reliance on costly imports are expected to result from the declining number of farmers and with low agricultural production.

There are three basic levers that can be used to help alleviate the labour shortage. Farmers who stay on their land can benefit from financial assistance and training to mechanize and automate their operations. The demand for manual labour will decrease as the amount of work that has to be done by hand decreases. Second, new agricultural technologies can promote productivity and help build business linkages between the city and the countryside; indeed, the appeal of the agribusiness industry to the young, tech-savvy, data-driven generation will be enhanced by the injection of technology and innovation. Finally, encouraging farmers to create cooperatives and negotiate collectively will boost farm revenues, allowing the sector to retain and recruit expertise.

ii) Investment Gaps

The second issue is the lack of investment in agriculture. Rabobank estimates that the Asian agri-food industry will face a US\$ 800 billion investment shortage by 2030. Despite its increasing riches, Africa's food security problem seems to be worsening. This can be attributed to investments in the agri-food sector, which are frequently postponed as international donors focus on humanitarian initiatives and risk-averse economic actors direct their investments to nations with more secure political and economic environments. Farm projects are generally avoided by investors because of narrow margins relative to other industries and higher long-term risks, such as weather and climate-related volatility. Small farmers' ability to adopt new technology and innovate is limited by these barriers to investment.

Three initiatives can help address these problems. Private investment can be encouraged through financial risk-sharing incentives such as trade credit insurance or investment guarantees. Small farmers may be able to pool their resources through incentives for market consolidation and cooperative formation. Furthermore, public investment in productivity-enhancing technologies could create a virtuous cycle, generating cash flow that would allow farmers to purchase additional equipment.

iii) Farmland Degradation

The third issue is the deterioration of cultivated land. Climate change is causing rising temperatures and water scarcity, as well as unsustainable production techniques, which affect agricultural production and the amount of arable land available. According to the United Nations, intensive farming degrades 24 billion tons of productive soil each year.

Three possible solutions to these issues have been identified. First, investments in research and development of climate-resilient farming systems can help improve productivity. Second, farmers can be taught to use chemicals more effectively. Third, OIC member countries can promote organic agricultural approaches that boost long-term biodiversity and plant resilience.

Food insecurity is a major factor in assessing future agricultural challenges. According to the United Nations, food security is defined as "unrestricted access to sufficient, safe, and nutritious food that meets the dietary needs and preferences for an active and healthy life." For four major reasons, food insecurity will continue to exist in the future:

- a) Climate change. Scientists agree that the global climate is warming and that extreme weather occurrences are becoming more frequent. The latter phenomenon has a considerable impact on agriculture, ranging from increased soil and water salinity to drought and land erosion.
- b) Aging rural population. Young people regard farming as having no future and are fleeing rural communities in search of work in the cities. As a result, there are not enough people to cultivate the land.
- c) Water scarcity. In many parts of the world, access to freshwater is increasingly limited, either because of water scarcity or contamination of the groundwater source.
- d) Eastern European Crisis. The current impact of the conflict between Russia-Ukraine is continuously increasing food prices, which are expected to remain high until 2024. This is happening at a time when most countries are experiencing loss of income, additional public expenditures, and increased poverty rates due to the prolonged pandemic.

The ongoing food crisis has indeed exacerbated structural food insecurity in the most vulnerable, fragile, and conflict affected member countries, such as Syria and those in the Sahel region. The current food crisis is of particular concern for the IsDB member countries, 36 of which are net food importers. Countries in sub-Saharan Africa and the MENA region are

the most vulnerable to increased food insecurity and malnutrition. In addition, of the 47 Low-Income Food-Deficit Countries (LIFDCs), 26 are OIC member countries. IsDB constituencies also include many fragile states affected by protracted conflict, and instability, with significant numbers of vulnerable populations at risk of falling further into poverty. If the recent trends continue, IsDB member countries will fail to achieve the SDG 1 and SDG 2, namely poverty and hunger reduction respectively.

6.4. Investment Opportunities

Three national clusters were formed among OIC countries to better tailor action plans and investment opportunities. Country clustering was based on the amount of agricultural land available in OIC countries, employment rate in the agriculture industry, farmland productivity, as well as the geographic location and value creation potential of OIC countries in relation to the previously assessed value chains (Table 6.2).

Initiatives to promote education and innovation in all OIC nations can help generate competitive advantages in the agri-food sector, utilizing existing know-how to improve quality and accelerate the development of sustainable solutions.

OIC members such as Bahrain, Oman, the United Arab Emirates, and Saudi Arabia are examples of untapped potential, with less than 2% of their geographical area classified as arable. Alternative methods, such as vertical farming and anti-desertification projects, hold great promise, but they also require a lot of money.

Other regions, such as Sub-Saharan Africa, have plenty of land but lack the know-how and resources to develop it. As other OIC member countries step in to help develop production and export capacity, foreign direct investment could play a critical role.

Both parties can benefit from a steady food supply through successful collaboration. For example, the United Arab Emirates has invested in agricultural initiatives in over 20 countries, primarily in East Africa, to create food and export "corridors" that ensure future food supplies, particularly for staple commodities like rice. This case study serves as a model for other OIC member countries with low production capacities, demonstrating how they could improve their food security by investing in the arable land and production capacity of OIC member countries.⁸

⁸ A detailed discussion on Türkiye, Nigeria and Indonesia is presented in the Annex IV.

Table 6.2: Main Clusters with Similar Market Characteristics of OIC Member Countries

Productivity champions	Production-focused	Domestic market potentials
<ul style="list-style-type: none"> ♣ Countries with agricultural sectors of global importance ♣ Above-average farming productivity value creation potential in processing often not yet fully exploited 	<ul style="list-style-type: none"> ♣ Countries with established agricultural sector but often insufficient infrastructure backbone ♣ Below-average farming productivity and primarily low labor force employment in agriculture 	<ul style="list-style-type: none"> ♣ Countries with high labor intensity and in need of basic production technologies ♣ Lower productivity combined with high employment in agriculture
<ul style="list-style-type: none"> - Egypt - Pakistan - Saudi Arabia - Kyrgyzstan - Malaysia - Bangladesh - Albania - Azerbaijan - Indonesia - Iraq - Sudan - Tajikistan - Türkiye - Uzbekistan - Oman 	<ul style="list-style-type: none"> - Guyana - Algeria - Nigeria - Afghanistan - Iran - Mauritania - Morocco - Côte d'Ivoire - Kazakhstan - Niger - Senegal - Sierra Leone - Togo - Tunisia - Uganda - Yemen - Libya - Syria* - Turkmenistan 	<ul style="list-style-type: none"> - Somalia - Cameroon - Chad - Djibouti - Guinea Bissau - Gabon - Guinea - Mali - Mozambique

Source: Islamic Development Bank (2020c). *OIC membership is suspended

7. Mining and Construction Sectors

7.1. Importance and Key Trends

Mining

Mining is among the most historical activities that have evolved and transformed to reflect modern technological advances, so that it has become fundamental to sustaining the growing needs of humanity. The mining sector is the main source of all raw materials, providing humanity with metals and other natural elements essential to many technological devices, especially those related to electronics. For example, about a quarter of the mass of an iPhone is aluminum, while about 14 % is iron, with smaller traces of copper, zinc, gold, and other elements. The industry is currently estimated to account for 1-2 % of global GDP, or more than US\$1 trillion (Islamic Development Bank, 2020f).

The development of the mining industry has the potential to increase employment rates, attract foreign direct investment, and stimulate economic growth — particularly in low-income countries. In addition, integrating the United Nations Sustainable Development Goals (SDGs) into the way mining is conducted can create immediate and significant benefits for a wide range of stakeholders. By strategically focusing on key areas where mining has some influence, such as SDG 7 (renewable energy), SDG 8 (jobs and economic growth) and SDG 9 (innovation and infrastructure), direct economic impact can be achieved, while mitigating indirect effects such as SDG 15 (life on earth). The off-grid hybrid wind farm and solar plant powering one of Mauritania's iron ore mines, for example, has not only addressed the country's lack of electrical infrastructure and made the mine self-sufficient, but has also alleviated part of the operation's carbon footprint while creating jobs for the local community.

Construction

Construction is an inevitable activity in contemporary human existence and the industry is highly correlated with other sectors, as well as with global economic growth. The outlook for the industry is positive as population growth and increasing prosperity push up demand for housing, office space, production buildings, warehousing, and distribution units. In 2018 the worldwide construction industry contributed 13 % to global GDP, with estimated value of US\$11 trillion and providing employment to almost 200 million people and is expected to reach a total value of US\$17 trillion, growing at a rate of about 4 % per annum, more than one percentage point higher than global GDP growth.

The largest construction markets in 2018 were China, the United States and Japan. Over the next decade, China is expected to increase its share slightly from 21 % of the global market in 2018 to 23 % in 2030. A similar shift is expected in the United States, whose share will increase from 13 to 15 %. India will likely rise to third place, more than doubling its share from 4 to 9

% of the global market. Indonesia, an OIC member country, is expected to rise to fourth place with 4 % of the market, up from the 8th place in 2018.

The sector's contribution to GDP goes far beyond its direct output in the form of construction work. Investment in the construction industry is of critical importance to developing countries, where real estate and infrastructure projects not only bring significant benefits to the lives of citizens, but also improve the business prospects of the country. In mature economies, the development of new commercial and residential areas and the improvement of infrastructure likewise make a vital contribution to economic growth.

In terms of segments, the construction industry can be divided into three main categories – residential buildings, nonresidential buildings, and infrastructure. The non-residential segment is the largest in terms of market value, accounting for 36 % in 2018, followed by the residential segment with 34 % and infrastructure with 30 %. By 2030, the highest growth is expected in the non-residential and infrastructure segments.

Construction materials and other construction industry inputs account for about 40 % of the total industry and were worth around US\$4 trillion globally in 2018. The largest segment is iron and steel, followed by cement, ceramic products, and glass.

The global iron mining industry, around 90 % of which is used as the raw material for steel, was worth about US\$ 180 billion in 2018. The steel industry itself is worth US\$ 780 billion worldwide. Thanks to its unique combination of strength, recyclability and relatively low cost, steel plays an essential role in the construction sector. The most widely sold type is the highly versatile carbon steel, which accounts for about 80% of total supply. China is the world's largest steel-producing country, providing more than half of global supply. The country is also mainly responsible for the increase in crude steel production, which has almost doubled since 2000.

Key trends

Despite the impact of the 2020 coronavirus pandemic lockdowns on the global economy, with knock-on effects on virtually all sectors, the outlook for the mining and construction sectors remains strong in the medium to the long term after recovery from the short-term effects of the pandemic. The construction industry was hit hard by the pandemic-induced economic downturn, with both residential and nonresidential construction being immediately negatively impacted by the difficulties faced by retailers and small businesses. Infrastructure construction also slowed as public debt increased in the face of significant recession-related spending. Demand for building materials such as cement, iron & steel, glass, and others were affected. Mine closures led to supply disruptions that affected many OIC member countries producing metals such as nickel, aluminum, manganese, zinc, cobalt, tungsten, lead, copper, tin and rare earth metals; precious metals (gold, silver and platinum); and diamonds.

The mining and construction sectors are responsible for a large portion of the global economy, together accounting for about 15 % of annual global GDP, contributing a total of about US\$13 trillion. Over the next decade, both industries are expected to be shaped various megatrends ranging from population growth and greater environmental awareness to rapid advances in technology and digitization. They will ultimately reshape both the structure of demand and the way companies create value.

Inevitably, the megatrends will not only give rise to challenges for countries, but also open up new avenues or opportunities for stakeholders along the value chain. In many cases, OIC member countries will need to introduce structural changes in response: vertical integration, shifting their focus to higher value-added segments, developing new business models, to name a few.

Population growth leads to increasing number of people, which increases demand for housing and consumer goods, as well as augmented items such as nickel based batteries, copper-based electronics and steel-based infrastructure. In turn, the increased demand translates into a significant increase in overall capital investment in manufacturing facilities. OIC member countries account for around a quarter of the world's population and approximately 44 % of the projected growth. To put these numbers in context, for every additional person in developed countries, about 60 more will come from developing countries.

Increasing Urbanization, it is predicted that about 60 % of the world's population will live in cities by 2030, up from 56% today. Cities occupy just 3 % of the Earth's surface area but account for 60 to 80 % of energy consumption and at least 70 % of carbon emissions. They also produce more than three-quarters of global GDP. Sustainable development requires a transformation in the supply of raw materials needed for urban spaces and a rethinking of how the construction process is carried out. Fast-growing cities rely on adequate infrastructure, which puts pressure on the construction sector. At the same time, increasing the level of basic services – access to clean water and a reliable power supply, for example – requires more minerals and construction materials. Looking forward, the growing need for urban and intra-urban mobility will also lead to increased demand for electric vehicles, trains, airplanes, and eventually drones, resulting in a greater need for metals.

Growing environmental awareness, even though scientists agree that human activity is a major factor in climate change, the impacts vary. In Africa, scarcity of freshwater is likely to increase, while in Oceania, the magnitude and frequency of natural disasters are expected to increase. Growing environmental awareness, stricter legislation and more effective enforcement are likely to have a strong impact on the mining and construction industries. Furthermore, the proliferation of adverse environmental effects of industrial activities may also cause social unrest, which can act as a catalyst for change. Consumers are moving toward sustainable consumption behavior due to increased environmental awareness. Similarly, companies are facing increased pressure from authorities to optimize the environmental footprint. Driven by

economic incentives (e.g. steel more profitable to recycle), growing recycling rates will shift the balance of value creation towards processing rather than extraction, in the mining sector. In construction sector, energy efficiency retrofits can further diversify the revenue streams and contribute to sector growth.

Changes in consumer behavior are influencing the mining and construction industries: higher spending power requires greater input of minerals for the manufacturing of electronics and durable goods, while sustainable business models shift the value potential towards processing and refurbishment. At the global level, adjusted per capita spending has increased by more than 30% in the past decade. Part of this spending is increasingly directed toward electronics. In addition, the prevalence of sharing economy models for urban transportation is increasing the demand for electric vehicles (electric cars, electric scooters, and electric bikes). All of this requires more minerals such as nickel for batteries, copper for wires and motor windings, aluminum for structural elements.

Advances in technology and digitalization are increasingly permeating all aspects of life all over the world. By 2030, three-quarters of the world's population is expected to be connected to the Internet, compared to only half today. On-the-go access technologies such as tablets and smartphones will only accentuate this trend.

For the mining and construction sectors, this means greater transparency and nearly uninterrupted access to key information on-site, such as the GPS location of miners. Connectivity also facilitates greater workforce mobility, as construction workers in developing countries are informed of job opportunities in more developed countries with labor shortages, for instance. Thus, digitalization is changing the fabric of business processes in mining and construction, as it is in many other industries. Currently, in most developed economies, mining involves complex coordination between machines and human operators, but humans are still in charge. Advances in technology and digitalization mean that decisions will increasingly be made automatically using artificial intelligence based on data algorithms, fundamentally reshaping operations.

7.2. Current Status

Mineral extraction is the backbone of the economies of many OIC member countries. Understanding the current position of OIC member countries on global value chains for the materials is relevant to generate insights to guide the way forward. Indonesia and Kazakhstan enjoy global importance in the production of certain materials (i.e. gold, copper and tin), while many other OIC member countries operate on a smaller scale with fewer minerals but in many cases with high national importance (i.e. Gabon with manganese or Guinea with bauxite). Overall, OIC member countries have a dominant endowment of nickel, aluminum, tin, manganese and gold, accounting for between one-fifth and one-quarter of global production of each of these metals. However, there is an overarching imbalance with many OIC member

countries focusing more on mining and less on processing. Gold is the most important mineral in OIC countries owing to its widespread production and high value, accounting for about 20 % of global production – gold is the main economic driver in countries such as Burkina Faso, Togo, Suriname, and Mali. Indonesia is the world’s largest producer of nickel, accounting for one-quarter of global supply but only 13 % of the processing market. In 2020, Indonesia reinstated a ban on exports of nickel ore, aiming to further expand domestic processing.

OIC member countries together account for around 26 % of global nickel mine production. Indonesia itself accounts for 25 % of world production. The second largest player in the OIC region is Türkiye, which ranks 21st in the world. OIC member countries are home to just under a quarter of the world's nickel reserves. In January 2020 Indonesia reintroduced its nickel export ban, first introduced in 2014. The aim of the ban is to support the country’s processing facilities. Its initial introduction in 2014 resulted in the loss of approximately 30,000 jobs in the country’s mining industry, but also the creation of nine new smelting facilities, in turn generating 17,500 new jobs with higher skill levels and greater perceived stability. The impact of the initial ban was significant, increasing national value creation from US\$1.1 billion in exports to US\$1.5 billion.

They lack the necessary capacity (plants, machinery, infrastructure) and therefore export metal ores for processing. In the global value chains trajectory, processing is where much of the value-added takes place – meaning that OIC member countries are not currently reaping the significant benefits that come from processing. For example, Guinea is one of the world's leading producers of bauxite, which is essential for aluminum production, but it has very limited processing facilities. However, having more mining capacity than processing capacity is not necessarily a problem for all materials. For precious metals, diamonds, copper and zinc, the production market is actually about three times larger than the processing market.

While the development of processing capacity is indeed a recurring theme for most OIC member countries, additional opportunities also exist. Indonesia, for example, is developing several mineral processing facilities and is now well positioned to expand further downstream. By recognizing the strategic importance of nickel and leveraging the country’s vast reserves, Indonesia could enter the manufacturing segment and reap additional value-added benefits. Progress in this direction is already evident with lithium battery production capacities estimated to begin by 2023.

Türkiye is the fourth largest cement producer in the world, with a total annual production of 84 million tons. The other main OIC member countries are Indonesia and Egypt, ranked sixth and tenth respectively, followed closely by Iran and Saudi Arabia. Per capita cement consumption in the African region, with an average annual consumption of approximately 120 kilograms per capita in West Africa, is well below the world average of 520 kilograms. By contrast, countries in the Middle East and Southeast Asia, like Indonesia, are experiencing

above-average growth due to increased GDP and population growth, necessitating residential and non-residential construction projects.

Although the situation varies by country, in the short-term, the industry will be characterized by global overcapacity. This trend will also affect OIC member countries: Saudi Arabia, for instance, currently has overcapacity of around 40 % as a result of the expansion of established players. Nevertheless, cement production remains a highly localized business and can potentially be part of the industrial backbone of most OIC member countries, thus contributing to the creation of skilled jobs.

Diversifying into other metals for battery production (e.g. nickel) could also prove highly beneficial. Recycling also presents an interesting opportunity for OIC member countries that currently focus on extraction. With suitable investment, individual nations will be able to develop their processing capacity and enter the growing recycling segment – provided, of course, that they can achieve the critical mass necessary to make this economically feasible.

Recycling is a major issue in the mining industry, and its importance is set to grow over the next decade and beyond. Most metals are infinitely recyclable, with significant energy gains in the process. For example, aluminum recycling generates around 95-% energy savings over its extraction and processing. However, different minerals are recycled at different rates in different countries. This fact, combined with growing consumer demand for minerals in general, means that even if recycling becomes more important, mineral extraction is not expected to decline anytime soon.

Mining is widespread in OIC member countries, but there are still opportunities for development in extraction that could attract investors. In the case of aluminum, for example, the current reserves-to-production ratio in OIC member countries indicates that mineral reserves are still under-exploited. Performing this analysis on Guinea, for example, shows that production at current levels can continue for about another 150 years. By contrast, the currently identified nickel and manganese reserves are significant, but the long-term sustainability must be considered when planning production.

For construction, OIC member countries are relatively strong in cement, producing around 12% of global output and generating a trade surplus of US\$180 million in 2018. However, in other construction materials, such as glass and steel, OIC member countries suffer from a trade deficit of around US\$2.6 billion, indicating a lack of capacity to meet domestic demand. In many OIC member countries, the processing capacity for certain construction materials is much more developed than that for mining. Some countries focus exclusively on processing, for which they import raw materials. For instance, in the iron and steel industry, Egypt, Saudi Arabia and the United Arab Emirates have limited involvement in extraction, with insignificant levels of iron ore production, but are strong in processing. Türkiye and Iran, on the other hand, are active at both ends of the spectrum in both extraction and processing, demonstrating

strong development potential in each of these sectors. OIC member countries produce 12% of the world's cement, with all but four countries having production capacity.

The overall outlook for the mining and construction industries in OIC member countries is positive and there are significant investment opportunities. Thus, extraction and processing capacities could be developed in a selective and sustainable manner. The task for the countries themselves is now to create an attractive environment for external players to engage in local industries. They can do this by introducing incentives for foreign direct investment (FDI), facilitating collaboration between national stakeholders and external investors, and ensuring an enabling regulatory environment based on international best practices. Stakeholders in the mining and construction industries should have a clear emphasis on sustainable development, prioritizing the United Nations Sustainable Development Goals.

Of the world's total proven reserves of iron ore, around 17% are located in OIC member countries, with Sierra Leone ranking fourth worldwide according to the latest estimates. Currently, Iran is the only OIC member country that features in the world's top 10 in iron ore mining, accounting for around 2% of production, followed by Kazakhstan, ranked 11th. Mauritania, Türkiye, and Sierra Leone all produce less than 1 % of the world's output, and the total production volume of OIC member countries is around 5 %. In terms of steel production, among the OIC member countries, only Türkiye appears in the top-ten of global ranking, in 9th place, with Iran in 11th place.

OIC member countries account for around 30 % of the world's bauxite reserves but are less strong in terms of aluminum production. Guinea has the world's largest reserves of bauxite, while the Middle East is gaining importance in processing. Of the estimated proven reserves of bauxite of over 30,000 million tons, OIC member countries account for around 30 %. Guinea leads the way, with proven volumes of 7,400 million tons of bauxite ore – about one-quarter of the world's reserves – while Indonesia also has significant reserves of around 1,200 million tons.

7.3. Key Challenges

The mining and construction sectors in OIC member countries present challenges in four main areas.

- 1) **Inadequate physical capital** is prevalent, resulting in limited mechanization, which is a challenge for artisanal mining and makeshift construction material operations, which often suffer from poor health and safety conditions for workers. Many OIC member countries have outdated, or inefficient technology compared to more developed economies, resulting in large productivity gaps and lost value. Limited processing capacity is also a problem, leading many countries to focus on exporting

raw materials rather than processing them domestically, with a consequent loss in value. Lastly, many OIC member countries also suffer from poor infrastructure, such as unreliable power grids and limited access to transportation hubs, which impede efficient operations.

- II) **Low human capital** is a major challenge, and one that takes a long time to resolve. Many OIC member countries suffer from a lack of employment opportunities for local workers, a result of both increasing automation and demographic expansion. Moreover, workers do not have the time or skills to switch new technologies. This problem of "technological illiteracy" has implications for the future development of industries in many regions.
- III) **Insufficient investment capital** to finance key initiatives such as updating production equipment or retraining the workforce. Some OIC member countries face problems with basic framework conditions such as stable governance and regulation, which ultimately allow investors to predict expected returns over the medium to long-term. Stability is particularly important for mining and construction, which are capital-intensive industries with payback periods of several years.
- IV) **Uncertain long-term sustainability**, resulting in fragile link between exploitation natural resources and the extraction of sufficient added value for investors, while allowing local communities to improve their living standards without negative environmental impact. In the mining sector, this means prioritizing environmentally beneficial practices – such as cyanide-free gold mining – over short-term profitability. In the construction industry, the main challenge is to control the amount of waste generated throughout the life cycle of construction, as well as the overall energy efficiency of the material processing phases. Ensuring long-term sustainability also means ensuring direct gains not only for the stockholders, but also for the local communities in which they operate. In the mining sector, this gives rise to "social contracts" between mining operators and communities or government, under which companies are expected to transfer more of the value generated to local regions.

7.4 Investment Opportunities

There are 18 key aspects of global value chain potentials that are associated with opportunities, challenges and risks within the mining and construction industries at different levels. However, five of them are highly strategic for OIC member countries in terms of investment priorities and opportunities, including cement, iron and steel, gold, aluminum and nickel. Each of these is analyzed to shed lights on the issues and challenges.

Cement, which is staple material for all three construction sectors (residential, non-residential and infrastructure), is a common attraction for investors. The global cement market was estimated at US\$310 billion in 2018, with about 160 countries involved in production. The industry has a significant regional affinity for production and market as transporting cement

long distances would be too costly to be profitable. The global value chain offers many development opportunities due to the abundant local availability of inputs, combined with growing cement consumption in many OIC member countries.

Steel is the most valuable construction material. In 2018, the market value was estimated at US\$780 billion, meaning that it accounted for about two-thirds of the global mining sector. Iron and steel also form a bridge between the mining industry and the construction sector, as it encompasses the extraction of iron ores and the multiple processing phases involved in steel production.

In terms of minerals, **aluminum** with US\$180 billion and gold with US\$170 billion represent the largest markets. **Gold** is the most important mineral for OIC countries, both because of its high value and the fact that it is widely mined. OIC member countries also have significant reserves of gold and bauxite (the main aluminum containing ore), so these are the two areas with long-term sustainable potential.

Despite the annual market value of the **nickel** is US\$30 billion, the industry is of interest because it is likely to develop dynamically by 2030 and beyond. Nickel is used in the production of batteries for electric vehicles, a sector that will grow rapidly. Batteries are likely to account for up to 30 % of total nickel demand by 2030, up from just five % today. Investors should note that OIC member countries have a strong position in the global nickel market, accounting for about a quarter of global supply.

In the mining sector, two major trends are likely to drive demand. The increasing use of electronics built around the Internet of Things (IoT), and the expansion of e-mobility and renewable energy. The trend of incorporating more and more electronics into manufactured goods is expected to accelerate, driven by what is known as "Industry 4.0" – the fourth revolution in manufacturing, involving the use of interconnected smart systems, machine-learning, advanced analytics, augmented reality, artificial intelligence, etc. The enhanced connectivity offered by 5G technology, for example, requires metals with low electrical resistance.

As urbanization and the trend towards "smart houses" continue, electronics will be integrated into an ever-widening range of items. Testing has begun already on a series of tested initiatives that aim to solve the everyday problems of urban life, such as traffic congestion, pollution, crime, and the high cost of living. The scope of such solutions is likely to expand over the coming decade and beyond. "Wearables" – electronic devices incorporated into apparel or worn directly on the body – are another area of growth. This segment roughly doubled in size between 2018 and 2019, from around 180 million units shipped to more than 300 million, an increase of more than 70 %. Today, one smartwatch or smart wristband is sold for every 10 smartphones. Smart electronics are becoming ubiquitous in human activity and are increasingly becoming part of the fabric of our lives.

Furthermore, industry experts predict major changes in consumption related to e-mobility and renewable energy. These developments will drive demand for electricity storage, i.e., batteries, which in turn will require increased production of metals such as cobalt, copper, nickel and rare-earth elements. Electric vehicles require two to four times more copper and ten times as much nickel per vehicle as conventional internal combustion vehicles; while requiring a significantly more cobalt, about nine kilograms per vehicle. By 2030, more than 20 million new electric vehicles are expected to be registered worldwide each year. That means 20 times more battery capacity will be needed each year for the transportation sector alone – not to mention the significant additional capacity required for large-scale hybrid energy storage and renewable energy.

Two major trends are expected to significantly influence the direction and practices of the construction industry over the next decade – higher prevalence of pre-fabricated components, as well as a growing emphasis on the energy efficiency of buildings and the manufacturing of building materials. Pre-fabrication refers to the assembly of components, ranging from individual parts to complete building rooms, in the factory rather than on site. These "pre-fab" sections are then transported to the construction site, where they are assembled and stacked. Developers face growing pressure on productivity, with clients demanding increased efficiency and shorter development times. As a result, the trend is toward modular structures, which save 30-50 % in time compared with the conventional approach of building from raw materials. The use of pre-fabricated sections also increases safety in the workplace.

Accordingly, the pre-fabrication market is expected to grow at an annual rate of about US\$ 10 billion – a CAGR of 6 to 7 % – by 2025. At the same time, customers, regulators and developers themselves are increasingly focused on energy efficiency throughout the building lifecycle. This topic has recently become a priority for all stakeholders, driven by the general trend toward increased environmental awareness. Globally, it is estimated that buildings are responsible for 40 % of energy consumption (of which residential buildings account for about 70%) and more than one-third of global CO₂ emissions. In the case of residential buildings, energy consumption depends largely on the number of people living in the building and its total floor area, with the main improvements being made in heating, lighting and cooking.

To meet the goals of the Paris Climate Change Agreement, buildings will need to be an estimated 30 % less energy per square meter by 2030. For the industry, this means a greater emphasis on energy efficiency in renovations and new construction, and developers will need to consider the environmental footprint of buildings throughout their lifespan.

About 35 of the 57 OIC member countries have relatively limited or no mineral resources. However, many of them still lack comprehensive data on resources, such as a country-wide analysis showing the minerals they possess. Advanced analysis can help make sense of complex data, such as overlaid multi-spectral satellite data or the results of deep earth

imagery, which combines seismic and electromagnetic imagery with advanced data processing techniques.

Automation and robotics are innovations that include autonomous vehicles, remotely controlled machines and robotic equipment. These are just a few of the innovations that are transforming the mining industry. For example, the Syama gold mine in Mali is one of the first mines in the world to use fully autonomous trucks, robotic loaders, and drills. Operators report measurable benefits from the implementation of these new technologies, including increased productivity, reduced maintenance costs and extended machine life. Advances are being made in ground, underground and aerial equipment.

Renewable energy has given rise to issues such as increasing energy costs from conventional sources, power surges and supply interruptions due to poor infrastructure and demand volatility, which are paving the way for increased development of renewable energy. This trend is reinforced by increasing environmental pressure on mining operators. Many OIC member countries are located in areas with high solar irradiance and therefore have significant potential for integrating photovoltaics into the energy production mix of their mining sites. In Burkina Faso, for example, several investments in solar energy are underway, to reduce the mines' reliance on diesel-powered generators. Another benefit of developing solar power plants is that local communities can benefit from part of the energy generated, or use it entirely after the mine closes, thus improving quality of life in areas close to mining sites.

Innovative environmental management in areas such as waste treatment, air emissions and water contamination can significantly reduce negative environmental impacts. Innovations focus on three main aspects: storage/sequestration, conversion (e.g. waste-to-energy), and recovery. At the same time, falling battery costs for mining vehicles and equipment could lead to substantial improvements in mine air quality. Lastly, electric haul trucks also generate 95 % fewer carbon emissions. Industry experts anticipate further scientific advances in molecular science and bioengineering. For instance, experiments have shown that specialized bacteria can be used to recover minerals from waste copper.

Applications of augmented and virtual reality can be effective for many OIC member countries that are experiencing workforce skill deficits in the use of new technologies. Operators can simply follow the software instructions while performing real operations and, if necessary, they can virtually access specialized human assistance. The benefits to OIC member countries can go far beyond more efficient maintenance operations. Simulating potentially lethal situations, such as the placement and detonation of explosive charges, can reduce error rates and increase overall safety. Miners are then able to observe how the mine environment will react to their actions, with potential errors identified and addressed individually. Miner preparation can also result in significant savings in cleanup costs and production delays.

Many mining operations, particularly in Africa, are located in remote areas and consequently rely on power supplied by on-site generation solutions such as diesel generators. These generators produce more than 1,000 tons of CO₂ per year for each MW installed – the equivalent of one person flying around the world 250 times non-stop. Added to this is the environmental footprint of the associated logistics and the complexity of fuel transportation.

As many OIC member countries are located in regions with high solar irradiation, the implementation of photovoltaic technology – solar power - is an obvious solution. Already, West African states such as Mali and Burkina Faso, for example, have seen many solar power plants planned and commissioned recently. In addition to its environmental benefits, photovoltaic technology is economically attractive. It offers rates of return of around 20 % and operating cost reductions of up to 40 %, depending on the existing energy mix. The social impact should not be underestimated either. Solar power plants are typically granted a "social license to operate", whereby the mining operators are expected to support local communities in exchange for the rights of mineral extraction. This means employing local labor – 75 to 100 local workers during the construction phase and another 40 planned for the operating phase, in the case of the 15 MWp solar power plant at the Essakane open-pit goldmine in Burkina Faso. It is also about generating low-cost power for local communities after the site closes, as in the case of the Luolo gold mine.

Given the inherent reliance on daylight associated with solar power plants, the ability to operate 24 hours a day could be a problem. As a solution, these plants can be installed in combination with conventional generators, forming what so-called hybrid power plants. However, to fully benefit from the advantages of sustainable energy production, the choice of battery storage capacity could be an alternative.

OIC member countries need to take advantage of the opportunities by building networked energy infrastructure for mining companies under Power Purchasing Agreements (PPA), if financing is available. This approach reduces the risk of capital-intensive investments by securing energy purchases for longer periods of time, while generating profits relatively early. For example, a 5 MWp solar power plant was commissioned at the Rosebel goldmine in Suriname after the mine operator entered into a ten-to-fifteen-year power purchase agreement, with break-even expected after only five to seven years. Solar power can also be a viable solution for mining companies confronted with very poorly developed and unreliable power grids. Investment in solar plants can provide power independence while lowering operating costs.

The construction industry is driven by demographic trends. With the world's urban population growing by 200,000 people each day, the need for new housing to accommodate these new city-dwellers is obvious. However, the expansion of the world's cities also requires the development of new social, transportation and utility infrastructure to support them. Historically, the construction sector has been slow to adopt and implement new technologies

in the past, lagging behind many other global industries. This is due in part to its fragmented, project-based nature. As a result, the productivity of the sector has remained largely unchanged for several decades.

Faced with a lag in the adoption of new technologies, the industry is taking bold steps into the future, with more than US\$ 10 billion invested in new technologies over the last decade. Key objectives cluster around the reduction of construction costs and improvements in resource efficiency. Five key dimensions in which the industry is innovating are of particular importance to OIC member countries. These are areas where transformation is already beginning to take place and will expand rapidly in the future: smart production, workforce augmentation, intelligent materials, connected construction sites, and alternative fuels and low emission energy generation.

"Smart production" such as prefabricated manufacturing (e.g., off-site, ready-furnished assemblies), increased use of robotics (e.g., autonomous drones) and new manufacturing techniques (e.g., 3D printing). Marriott International used a modular construction approach in a recent project, for example, producing more than 600 hotel rooms off-site in Poland and shipping them to the construction site in London. The resulting reduction in on-site work is estimated to at 80 -90 %. Another innovative smart production technique is 3D printing. Among OIC member countries, Saudi Arabia is a pioneer in this field. In early 2019, it acquired the world's largest 3D construction printer with the aim of mass-producing houses.

Many OIC member countries are facing a shortage of housing and related infrastructure, with additional pressure from rapid population growth. OIC member countries are expected to show above industry average construction growth by 2030. One obvious result will be an increase in the number of buildings, both commercial and residential. A less obvious implication is the impact that increased volumes will have on local authorities, who are responsible for providing construction companies the necessary permits and ensuring compliance. Furthermore, as technology is integrated into all construction, the complexity of integrating suppliers increases exponentially. It is important for OIC member countries to take advantage of 3D printing technology in construction, which offers many benefits, including reduced cost of ownership and faster development timelines. As a result, housing becomes more affordable and accessible for local populations – a significant social benefit. For developing countries, including OIC member countries, 3D printing can help overcome some of the inherent infrastructural barriers. Moreover, given its relative simplicity, this upcoming technology can be adopted by smaller, more regional players with relative ease. In addition, the "digital" component makes it much easier to monitor and optimize processes, while allowing stakeholders to access real-time data, thereby fostering collaboration.

Saudi Arabia is planning to build more than 1.5 million residential units by 2030. As part of this effort, it has launched the Building Technology Stimulus Initiative, which aims to increase domestic supply of building materials to 70% and cut construction costs by between 5 to 20

%, while keeping construction times to less than 90 days. In doing so, the country hopes to provide Saudi nationals with around 7,000 direct and indirect construction jobs. Part of the plan is to implement innovative 3D printing technology, which offers significant advantages over traditional construction methods. In 2018, the Saudi government conducted a pilot project to construct an 80 square-meter house using 3D printing. As a result, the approximately 50 structural elements were ready within one week and the entire house was fully completed (including roof, windows, heating, ventilation, electrics, and plumbing) by the fifth week.

The cost and time savings offered by 3D technology, especially when combined with other on-site innovations, range between 20% to 25%. For every four to five houses built using traditional methods, the new technology can deliver one extra house for the same total cost and in the same time frame. Following the government's lead, the Saudi private sector has also started investing heavily in 3D printing technology. Early last year, a Saudi construction company bought one of the world's largest 3D construction printers, capable of producing buildings nine meters tall. A large Middle Eastern building materials company also invested approximately US\$ 6 million in setting up a 3D printing prefabricated concrete plant.

Building Information Modeling (BIM), or the use of a digital platform based on the 3D modeling of physical places and objects, while technologically feasible for some time, has finally instigated disruption within the construction industry. The United Arab Emirates has experienced significant growth in the construction sector, in 2017, having cumulatively accounted for more than half of construction in the region covered by the Gulf Cooperation Council (GCC). As early as 2013, Dubai mandated the use of BIM for all buildings of 40 stories or higher, large-scale projects, special facilities such as hospitals and universities, and any projects requested by the Foreign Office. This requirement was extended in 2015 to all buildings of 20 stories or more.

The widespread adoption of BIM facilitates collaboration between stakeholders. It also increases transparency, making changes to the design or execution of the project visible to all. Other benefits appear throughout the value chain, including optimizing the building area and the ability to develop clear construction methodology, thanks to the ability to digitally visualize the entire structure before and during the construction process. In 2020, Dubai further expanded the application of BIM by consolidating the permitting systems between the municipality and the building development committee. The government's overall goal is to continue boosting the sector by creating cost savings for current initiatives and, at the same time, attracting new investment.

OIC member countries, particularly those with booming populations, such as the cities of Lagos in Nigeria and Jakarta in Indonesia, could reap similar benefits by following Dubai's lead. BIM implementation will also benefit member states with ambitious construction projects, such as Saudi Arabia's NEOM. Transparency on proposed or expected project changes will

allow for accurate, real-time cost simulations, while flagging any potentially non-compliant activity (e.g. a proposal that could affect current licenses).

Recommendations

- Many OIC member countries focus on extraction – where further value can be unlocked by developing processing and even manufacturing. There are several opportunities to turn the key challenges of OIC member countries into competitive advantages;
- Mineral-rich countries should pursue downstream integration – the depth of processing depends on key competitive advantages (e.g., affordable energy);
- Establishing manufacturing and processing facilities (i.e., upstream integration) is viable for countries with high levels of domestic/ regional consumption, even in the absence of mineral resources;
- Value chain expansion into processing will lead to an increase in domestic workforce qualification due to the specific technical skills required - however, the additional employment in processing will be offset by increased automation in mining;
- Renewable energy generation is a cost-effective and sustainable solution to meet the high energy demand of the mining and construction sectors;
- OIC Member Countries have vast potential for renewable energy, such as solar and hydro – alternative financing models (e.g., BOOT and PPA) could bridge the investment gap;
- Major improvements in the construction sector are also possible by adopting energy-efficient solutions and alternative fuels; these can reduce CO2 emissions by up to 40 % in energy-intensive materials (e.g., cement), reduce costs and promote the circular Economy;
- OIC member countries need to position themselves as early adopters or innovation leaders – breakthrough solutions often create competitive advantages;
- Develop extensive expertise in targeted technological innovations being considered – 3D printing is a potential solution for affordable housing;
- Investments in innovation hubs/centers should be pursued –providing the collaboration platform as well as incentives for SMEs and startups to operate;
- Strong government commitment is needed to integrate innovation as part of the countries' national strategy. The private sector is crucial to the development of the mining and construction sectors in OIC member countries. In this regard, new collaboration models will help share risk and unlock growth potential;
- Collaboration among OIC member countries can unleash their full potential, thereby stimulating socio-economic growth, by leveraging country-specific advantages and collectively overcoming inherent barriers to development; and
- Unlocking private investment will require fair risk-sharing in large-scale projects and increased regulatory stability; easier access to finance for smaller players and smart allocation of knowledge and capital (“smart finance”) to sectors with the highest potential will foster innovation.

The background features a complex network of thin, glowing blue lines that intersect at various points, creating a web-like or crystalline structure. Several of these intersection points are highlighted with bright, circular blue glows, adding a sense of depth and focus to the overall design.

PART III

INVESTMENT FUNDS FOR
DEVELOPMENT

8. Role and Importance of Investment Funds

8.1 Introduction

Investment funds, with their broad range of investment goals targeting specific regions and industry sectors, are powerful drivers of prosperity. Over the years, the sector has witnessed marked growth worldwide, underpinned by greater demand from retail and institutional investors for well-diversified, professionally managed investment products that offer access to capital markets. Indeed, with many different types available in the market, investment funds provide inherent advantages at the household, corporate and country levels. This chapter seeks to illustrate the major types of investment funds, both conventional and Shari'ah compliant, in addition to highlighting the different channels through which investment funds can potentially support OIC countries, particularly in achieving sustainable development.

8.1.1 What are Investment Funds?

Serving both the retail and institutional markets, investment funds are financial vehicles that pool money contributed by a group of individuals to invest collectively in various portfolios of financial instruments, including stocks, bonds, and other securities, according to specific criteria and investment goals. As one of the most successful innovations in the global financial architecture, investment funds offer investors the opportunity to diversify and allocate investments systematically across a wide range of assets, geographies and industries to reduce the risk of asset concentration, benefit from economies of scale and take advantage of differences in returns. By investing in mutual funds, investors benefit from the specialized management and expertise of professional fund managers to enhance their financial well-being and ensure that their investment goals are met.

Investment funds provide considerable benefits. They play a crucial role in facilitating the accumulation of savings, whether for major investments or for retirement. They are also important because they make institutional and personal savings available as a source of funding for businesses and projects that contribute to economic growth and employment.

8.1.2 Different Types of Investment Funds

Investment funds have a set of goals that meet the requirements of investors and are commensurate with acceptable levels of risk. The type and composition of the assets in which

the fund invests determine the level of risk and return expected by investors. Broadly speaking, the following are the different categories of funds:

- **Equity funds.** Equity funds invest primarily in equities, i.e. in shares of publicly traded companies. Stocks are tangible assets that can also protect against inflation. Anyone who acquires fund shares becomes a co-owner of the various companies in which the fund invests. While some funds invest in equities from around the world, others focus on specific themes, industries or countries. They generate their earnings from rising stock prices and dividends. Over long periods, equity funds are among the most profitable types of funds; however, fluctuations in value are also relatively high.
- **Bond funds.** Bond funds invest in interest-bearing securities such as corporate and sovereign bonds. They set different priorities regarding regions, exhibitors, currencies or maturities. The most important income components are interest payments and price gains.
- **Balanced/hybrid funds.** Balanced funds combine various investments, such as stocks and bonds or money market instruments. This enables them to react flexibly to different market situations. Depending on whether the fund strives for safety or opportunity, it focuses more on fixed income or equities.
- **Open-ended real estate funds.** Open-ended real estate funds generally invest in commercial properties such as office buildings, shopping centers, logistics buildings and hotels, in the country or abroad. Some funds have a focus on specific countries or regions; others also specialize in residential properties. Their performance depends on the level of rental income and the evolution of the value of the properties. Special holding periods and return rules apply to open-ended real estate funds.
- **Exchange traded funds (ETFs) / Index funds.** In the case of ETFs, no fund manager selects the investments; instead, they track an index such as the DAX, TecDAX or MSCI World. Their performance therefore corresponds almost exactly to that of the index depicted. There are different replication methods: most funds buy the securities contained in the index (physical or replicating replication). Some artificially replicate the performance of the index, for example by contractually 'swapping' the performance and income of securities (synthetic replication). Investors can buy many ETFs on the stock exchange and trade them daily.
- **Money market funds.** As the name implies, these funds invest in the money market - in fixed-term deposits, fixed-income securities or bank deposits; they also invest in certain high-quality, short-dated bonds with fixed interest rates up to 13 months. Yields generally correspond to current market interest rates in interbank transactions.

As mentioned above, investment funds typically consist of a single type of asset. Some, however, specialize in alternative investments, such as commercial property. There are also portfolios that have exposure to many different types of assets. Multi-asset funds, for example, can hold a mixture of stocks, bonds, property, cash, commodities, and other funds (Figure 8.1).

Figure 8.1: Different Types of Asset Classes



Source: Franklin Templeton

8.2 State-owned Funds

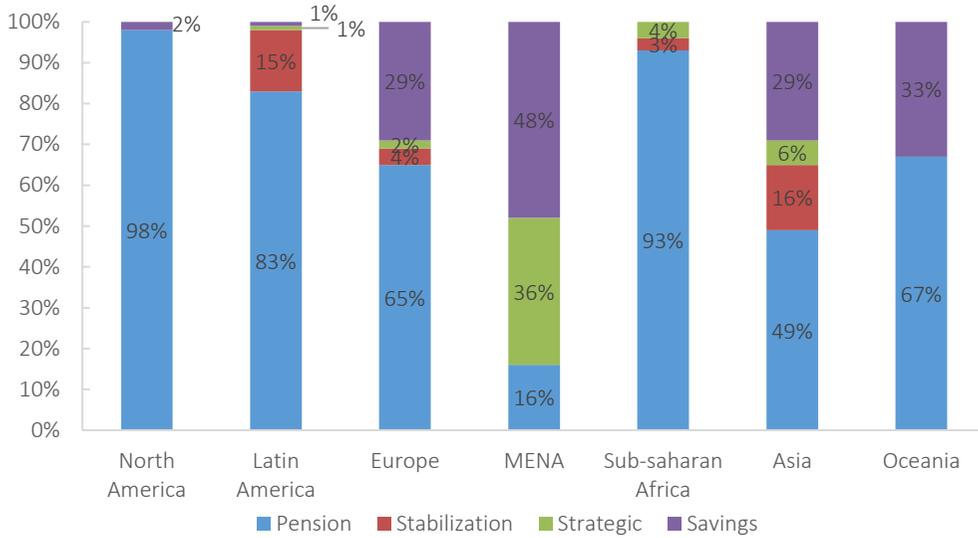
8.2.1 Sovereign Wealth Fund

Also known as a national wealth fund, a sovereign wealth fund (SWF) is a state-owned investment fund comprised of government-generated funds that are invested in a variety of financial assets to achieve national objectives. Given their influence and long-term investment horizons, SWFs are uniquely positioned to promote long-term value creation and sustainable market outcomes. In general, the sources of pooled money for SWFs are:

- Balance of payments surpluses
- Official foreign currency operations
- The proceeds of privatizations
- Governmental transfer payments
- Fiscal surpluses
- And/or receipts from resource exports

The rationale for the creation of each SWF is unique, with a range of economic, financial, and political structures, mandates, and objectives (Figure 8.2). While they differ from country to country, the potential objectives of SWFs include for example: i) diversifying assets; ii) achieving higher returns on reserves; iii) securing pensions in the future; iv) generating wealth for future generations as natural resources are depleted; v) implementing price stabilization schemes; vi) to promoting industrialization; and vii) promoting strategic and political objectives.

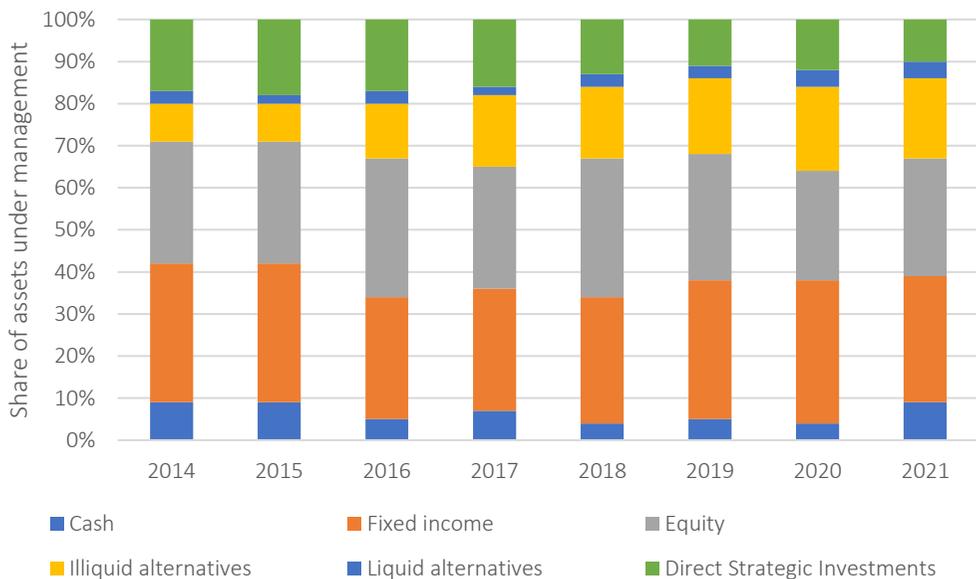
Figure 8.2: State-owned Investors' Mandate per Region (% based on AuM)



Source: Global SWF

It is widely accepted that most SWFs have a business objective of achieving a positive risk-adjusted return on their pool of assets. It should be noted that some SWFs are not as transparent as others-- for example, one SWF's policy may allow it to disclose their investment holdings and strategy on a periodic basis, while another's opaque structure keeps them private (Figure 8.3).

Figure 8.3: Asset Allocation of Traditional Assets of Global SWFs by Asset Class (2014-2021)



Source: Statista

Table 8.1: Sovereign Wealth Funds in OIC Countries

Global Position	Name	Estimated Total Assets (US\$ million)	Country
3	Kuwait Investment Authority	737,939	Kuwait
4	Abu Dhabi Investment Authority	708,750	United Arab Emirates
6	Public Investment Fund	620,000	Saudi Arabia
9	Qatar Investment Authority	450,000	Qatar
11	Investment Corporation of Dubai	299,713	United Arab Emirates
12	Türkiye Wealth Fund	294,093	Türkiye
13	Mubadala Investment Company	284,470	United Arab Emirates
17	National Development Fund of Iran	139,000	Iran
19	Abu Dhabi Developmental Holding Company	102,000	United Arab Emirates
21	Emirates Investment Authority	78,000	United Arab Emirates
22	Brunei Investment Agency	71,604	Brunei
24	Samruk Kazyna	68,384	Kazakhstan
25	Libyan Investment Authority	67,000	Libya
27	National Oil Fund of Republic of Kazakhstan (Kazakhstan National Fund)	55,322	Kazakhstan
28	State Oil Fund of Azerbaijan	45,025	Azerbaijan
32	Khazanah Nasional	30,492	Malaysia
37	Fund for Reconstruction and Development of Uzbekistan	22,800	Uzbekistan
38	Azerbaijan Investment Holding	22,000	Azerbaijan
40	Mumtalakat Holding	17,520	Bahrain
42	Oman Investment Authority	17,000	Oman
45	Sovereign Fund of Egypt	11,959	Egypt
63	Nigeria Sovereign Investment Authority	2,959	Nigeria
70	Sharjah Asset Management	1,900	United Arab Emirates
77	Indonesia Investment Authority	1,039	Indonesia
80	Palestine Investment Fund	856.2	Palestine
81	Senegal FONSIS	846	Senegal
84	Bahrain Future Generations Reserve Fund	624	Bahrain
86	Guyana Natural Resource Fund	608	Guyana
87	Fujairah Holding	500	United Arab Emirates
99	National Fund for Hydrocarbon Reserves	159	Mauritania
100	Sovereign Fund of the Gabonese Republic	143	Gabon
	Total OIC (31)	4,152,705	
	Global Total (100)	10,195,058	

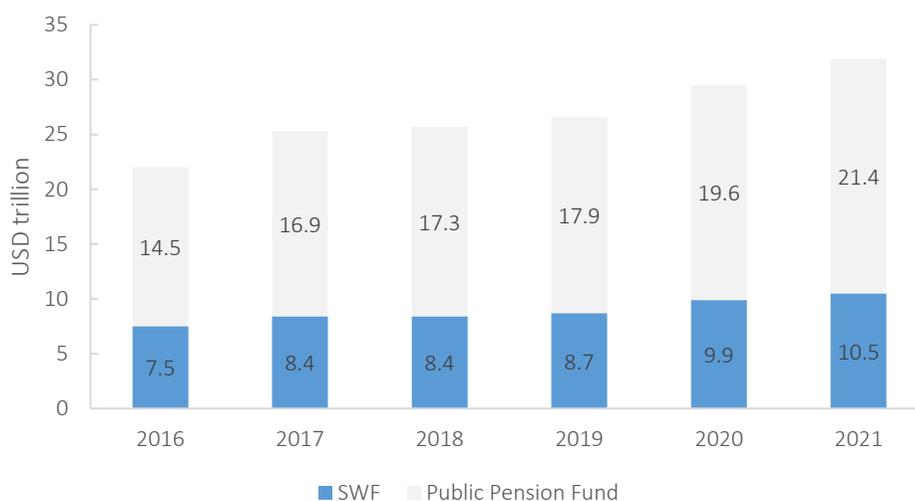
Source: Sovereign Wealth Fund Institute, as of June 2022.

For OIC countries exporting non-renewable resources, the main challenge is to transform these resources into sustainable and stable future revenues, compensating for the reality of volatile commodity prices and limited reserves. As Table 8.1 shows, most SWFs in OIC countries were established by resource-rich countries for stabilization and/or saving purposes, with the largest SWFs in terms of total assets largely concentrated in the Middle East region. The world’s oldest SWF, the Kuwait Investment Authority, with US\$ 738 billion in assets, is the largest SWF in the OIC region and the third largest in the world. By comparison, the total value of assets managed by SWFs worldwide is US\$ 10.2 trillion, according to statistics from the Sovereign Wealth Fund Institute (Figure 8.4).

8.2.2 Public Pension Funds

Public pension funds are investment pools set up by governments or social security institutions that provide participants with a large, stable retirement income and vital coverage and support in difficult times. The funds are contributed by employees or employers (or both), or by direct government tax transfers. Pension funds are the largest investment pools in most countries and invest in diversified portfolios that include stocks and bonds and a variety of asset classes including private equity, real estate, and infrastructure, and currently hold US\$ 21.4 trillion in AuM (Figure 8.4). Out of the world’s top 100 public pension funds, only five OIC countries have made the cut, possessing only 2.7% out of the world’s total (Table 8.2).

Figure 8.4: SWF and Public Pension Funds’ AUM (2016-2021)



Source: Global SWF

The latest UN estimates show that by 2050, the segment of the world's population aged 65 and over will more than double, from 703 million today to 1.5 billion (Table 8.3), while global life expectancy beyond 65 will increase by 19 years. The latest projections also show that the number of people aged 80 or over will triple in the next 30 years. Among country groups, the less developed countries, excluding the least developed countries, will be home to more than

two-thirds of the world's elderly population (1.1 billion) in 2050, which will impact many OIC countries and present an unprecedented set of multi-faceted challenges such as changes in savings and investment patterns, lack of adequate social protection systems, especially in developing economies, and a deteriorating fiscal balance, etc. These significant projections underscore the need for OIC countries to focus on establishing or reforming social protection programs to include a sound and sustainable pension system that not only contributes to long-term savings but also provides capital reserves that will support the future growth of the productive capacity of OIC countries.

Table 8.2: Public Pension Funds in OIC Countries

Global Position	Name	Estimated Total Assets (US\$ million)	Malaysia
19	Malaysia Employees Provident Fund	238,141	Malaysia
37	The Public Institution for Social Security (PIFSS)	134,000	Kuwait
45	General Organization for Social Insurance	115,405	Saudi Arabia
80	Public Pension Agency	51,500	Saudi Arabia
87	National Authority for Social Insurance of Egypt	46,363	Egypt
Total OIC (5)		585,409	
Global Total (100)		21,498,615	

Source: Sovereign Wealth Fund Institute, as of June 2022.

Table 8.3: Number of Persons Aged 65 Years or Above (2019 and 2050)

Region	Number of persons aged 65 or over in 2019 (millions)	Number of persons aged 65 or over in 2050 (millions)	%age change between 2019 and 2050
World	702.9	1548.9	120
Sub-Saharan Africa	31.9	101.4	218
Northern Africa and Western Asia	29.4	95.8	226
Central and Southern Asia	119.0	328.1	176
Eastern and South-Eastern Asia	260.6	572.5	120
Latin America and the Caribbean	56.4	144.6	156
Australia and New Zealand	4.8	8.8	84
Oceania (excluding Australia and New Zealand)	0.5	1.5	190
Europe and Northern America	200.4	296.2	48

Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019.

8.3 Global Islamic Funds

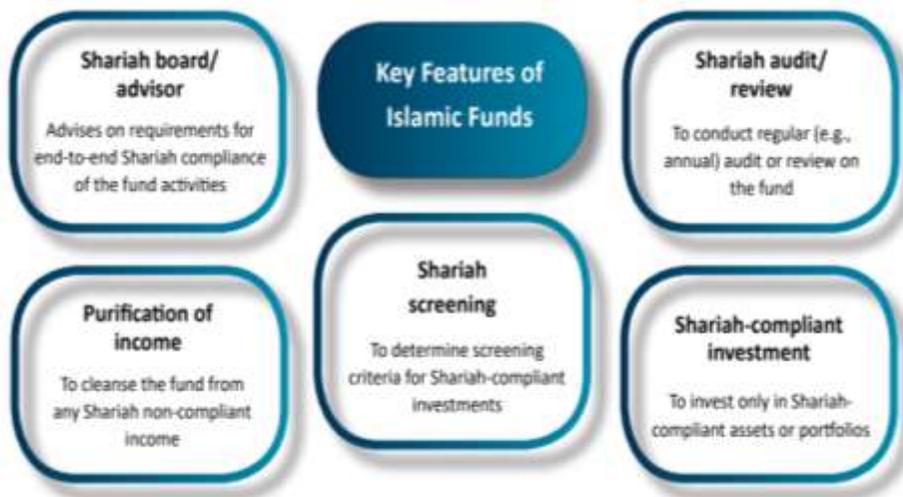
8.3.1: Overview

Islamic funds are investment funds that are governed by Shariah principles with respect to their structure, operations, activities and investments. A supervisory board is usually present to monitor and certify this compliance. All investors, whether Muslim or non-Muslim, can invest in Islamic funds. There are specific requirements that must be met in order to avoid anything prohibited by Islam.

The exclusion of investments that involve activities or products forbidden by Shariah principles such as alcohol, pork products, military equipment or weapons, gambling, tobacco and other immoral and unethical activities. This is ensured through strict Shariah control.

1. The exclusion of investments in conventional financial services or debt instruments that earn financial returns by collecting interest or surplus (riba). For an Islamic fund to remain Shariah-compliant, interest and dividends received from "impure" underlying investments or excess capital gains from the disposal of the relevant securities will be donated to charity.
2. Not to engage in risky investments (gharar) or anything involving speculations which are considered to be close to gambling (maisir) (Figure 8.5).

Figure 8.5: Key Features of Islamic Funds



Source: CIBAFI, ISRA

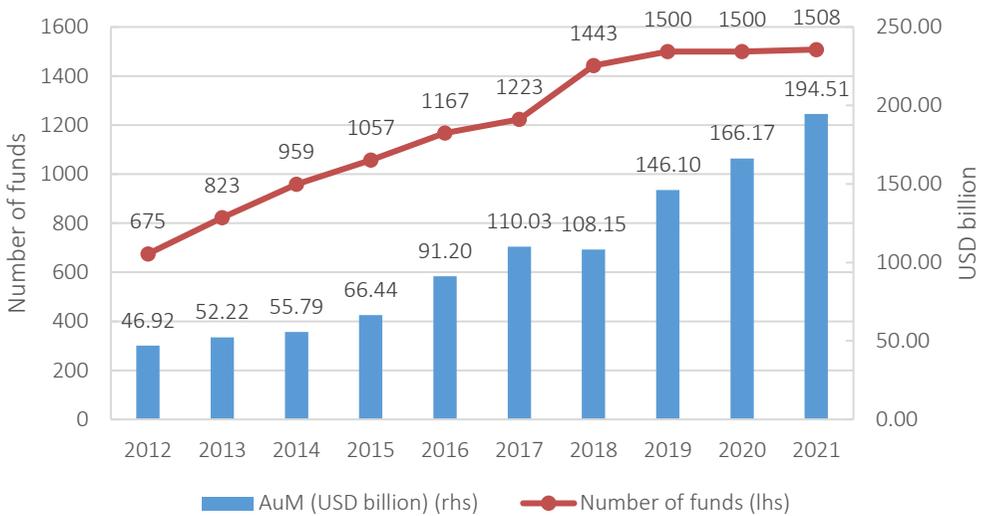
8.3.2 Types of Islamic Funds

There are several types of Islamic investment funds, including equity funds, money market funds, commodity funds, fixed income/sukuk funds, mixed funds and real estate funds. Each fund is subject to conditions relating to collateral, the duration of the investment and the markets in which it invests (Table 8.4).

Table 8.4: Types of Islamic Funds

Equity fund	In an Islamic equity fund, money is invested in shares of stock companies. The profits come mainly from the capital gains by purchasing the shares and selling them when their price increases. Profits also come from the dividends distributed by the companies concerned.
Money market fund	An Islamic money market fund invests in money market instruments that comply with Shariah principles. Money market funds are the largest type of Islamic fund in terms of assets under management, accounting for approximately 41% of all asset funds worldwide.
Commodity fund	In this type of fund, the subscription amounts are used in purchasing different commodities for resale. The profits generated by the sales constitute the income of the fund, which is distributed pro rata among the subscribers.
Fixed income/sukuk	Funds will be invested in diversified portfolio of sukuk to secure and distribute annual income to unitholders. These could include government, corporate, municipal or convertible sukuk.
Mixed fund	Funds invest in more than one asset class. Mixed funds invest in a combination of different asset classes to diversify the portfolio in order to minimise the risk.
Real estate fund	Very similar to a conventional real estate fund, except the income of an Islamic REIT and the manner in which the fund is managed must be Shariah-compliant and exclude unauthorized rental activities.

Although still a relatively nascent industry compared to its conventional counterpart, the global Islamic funds market has grown by a remarkable 300% over the last decade, reaching nearly US\$200 billion in assets under management (AuM) (CIBAFI, 2022). This remarkable growth is supported by the growing interest in Shariah-compliant investments, coupled with the diverse range of Islamic funds available in various jurisdictions across the globe. During the period 2012-2021, the global Islamic funds market grew at an average of around 18% in assets under management. As shown in Figure 5.6, by the end of September 2021, the total assets under management of Islamic funds increased by 17.1% to US\$ 194.51 billion, a significant increase from US\$ 166.17 billion in 2020 (Figure 8.6).

Figure 8.6: Growth in Assets under Management (AuM) and Number of Islamic Funds (2012-2021⁹)


Source: CIBAFI, Refinitiv10

In general, the main concentration of Islamic funds is in countries with Muslim populations in the OIC region. To date, Saudi Arabia and Malaysia remain the main domiciles of Islamic funds worldwide, reflecting strong capital markets. In terms of total number of Islamic funds, Malaysia is ranked first, followed by Indonesia and Saudi Arabia (Figure 8.7). In terms of total assets under management, the global Islamic funds market remains highly concentrated in the markets of Saudi Arabia, Iran and Malaysia, accounting for more than 70% of total assets under management. The Islamic fund market is not exclusively confined to Islamic jurisdictions. As Figure 8.8 shows, the United Kingdom, Luxembourg, the United States and South Africa also have nascent Islamic fund markets, despite having mature conventional fund markets. In some OIC countries such as Bangladesh, Iraq, Sudan, and Jordan, the Islamic banking sector is well-established, but very few funds are domiciled due to various factors at play, such as the lack of an enabling environment and an inadequate regulatory framework, among others. In terms of asset type, money market funds account for the largest share of global Islamic fund market in terms of assets under management (30.51%), which is to be expected given that capital preservation remains a priority for investors in Shariah-compliant instruments, particularly in the GCC markets (Figure 8.9). The second most largest asset type is sukuk funds (28.48%), followed by equity market funds (25.77%).¹¹ At the individual country level, Saudi Arabia took the lead in terms of total assets under management in 2021, with a

⁹ Data is updated until September 2021, however for some funds data is updated until June, July, or August 2021.

¹⁰ Source is based on CIBAFI database for years 2020 and 2021. Data for the years 2012-2019 are sourced from Refinitiv Eikon - Islamic finance development indicator (IFDI).

¹¹ The Refinitiv's classification system is different from some others, including the one used by Bloomberg. In addition, there are problems with the classification of some funds on which limited public information is available, and some issues with overlapping data when some funds invest in others. The data should therefore be used with some caution.

value of US\$ 53.3 billion, followed by Iran (US\$ 43.6 billion) and Malaysia (US\$ 43.5 billion) (Figure 8.10).

Figure 8.7: Top 10 Countries by Islamic Funds Domiciles by Number (2021)

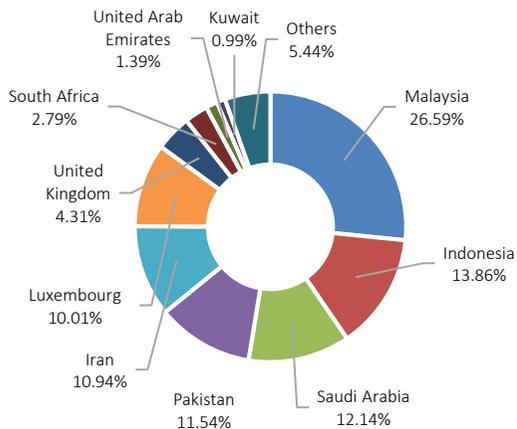


Figure 8.8: Top 10 Countries by Islamic Funds by AuM (2021)

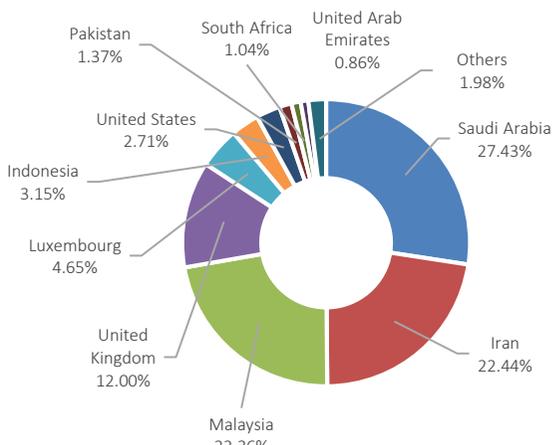
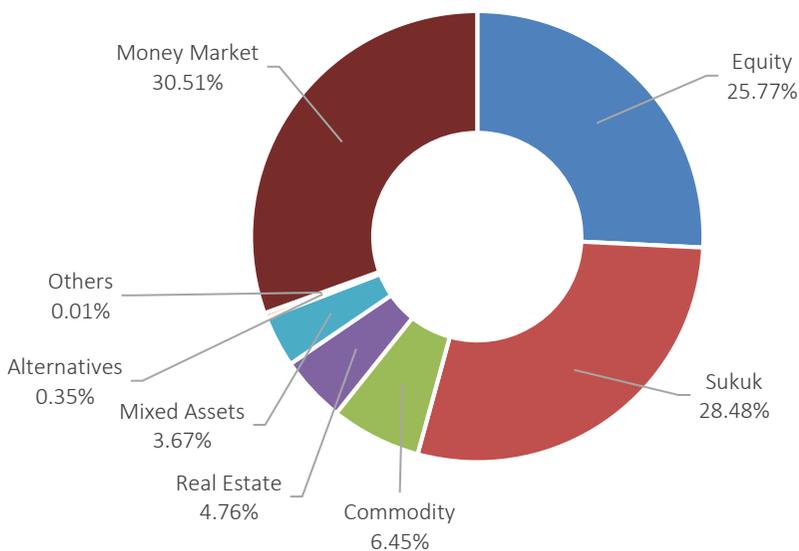
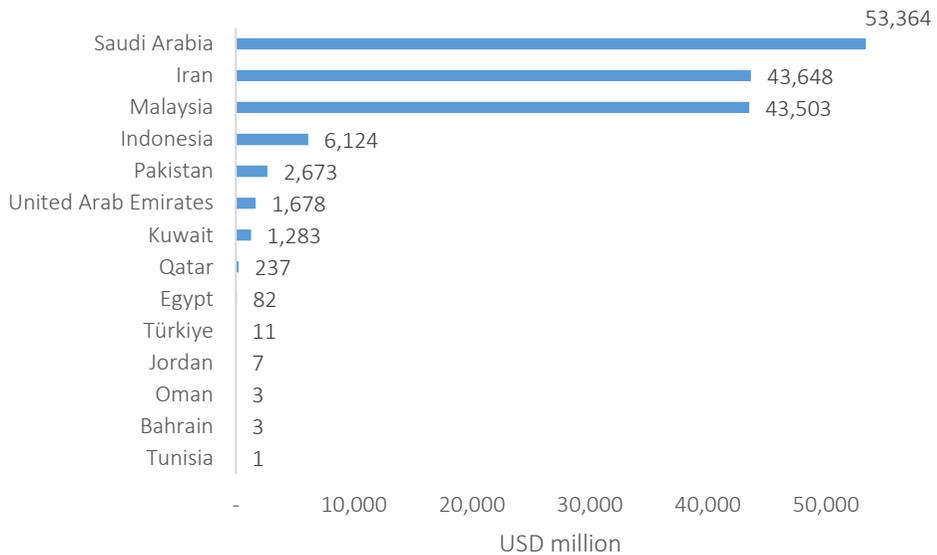


Figure 8.9: Type of Islamic Funds by AuM (2021)



Source: CIBAFI, Refinitiv

Figure 8.10: AuM by Selected OIC Countries (US\$ Millions, 2021)

Source: CIBAFI, Refinitiv

In general, a small number of Islamic banks are directly involved in the Islamic funds market as fund managers and tend to act as distributors of funds managed by others, offering investment opportunities to their clients (individuals and institutions) either directly or through a subsidiary. Examples include Al Rajhi Capital (a subsidiary of Al Rajhi Bank, Saudi Arabia), BIMB Investment (a subsidiary of Bank Islamic Malaysia), and Al Meezan Asset Management (a subsidiary of Meezan Bank, Pakistan).

While there is strong growth potential in the Islamic fund sector, several challenges remain. These include: i) lack of liquidity due to limited diversification, ii) limited number of Shariah-compliant investments, iii) inadequate legal and regulatory framework for Islamic funds and adoption of regulatory standards, iv) lack of investor awareness of Islamic funds, v) lack of standardization in Shariah compliance and screening of Islamic funds, vi) slow pace of innovation and product development; and vii) cross-border regulatory limitations.

9. Impacts of Investment Funds

The global crises caused by the COVID-19 pandemic and ongoing global challenges have caused serious setbacks in achieving the critical economic, social and environmental goals outlined by the United Nations Sustainable Development Goals (SDGs). Even prior to the pandemic, while commendable—albeit uneven— progress has been made to fulfil the SDGs, reports have confirmed that the world is not on track to meet many of the goals, and that accelerated action is needed in various areas. To this end, OIC countries need to intensify their efforts in formulating a wide range of targeted policy interventions and financing measures that allow for efficient mobilization and allocation of resources with the purpose of achieving inclusive sustainable development and supporting resilient economic recovery after the COVID-19. As highlighted in Chapter 2, current investment gaps in OIC countries need to be examined and addressed to ensure that acute development needs, such as infrastructure, are met accordingly.

As significant players in the global financial markets and whose allocation decisions largely determine the efficient functioning of an economy, investment funds can also play a vital societal role in rebuilding the development paths of OIC countries, as outlined below.

9.1 Financing and Stimulating the Real Economy

Investment funds are intermediaries and a vital source of economic growth. They bring together money provided by millions of investors seeking appropriate savings vehicles and match it to the demand for capital by businesses and governments (e.g., the financing needs of the real economy). This way, investment funds meet both the short-term funding needs and long-term capital requirements of businesses and governments, while generating returns for investors. This efficient aggregation and allocation of capital to productive uses thus enables growth and innovation and is a critical link in the savings-investment channel. In addition, investment funds have become critical to promoting productivity and efficiency in the public and private sectors by fostering economic activity through their intermediation of a significant share of global, cross-border capital flows to emerging market and developing economies (EMDEs) (Financial Stability Board, 2020).

9.2 Fostering Sustainable Growth, Green Economy and Financial Stability

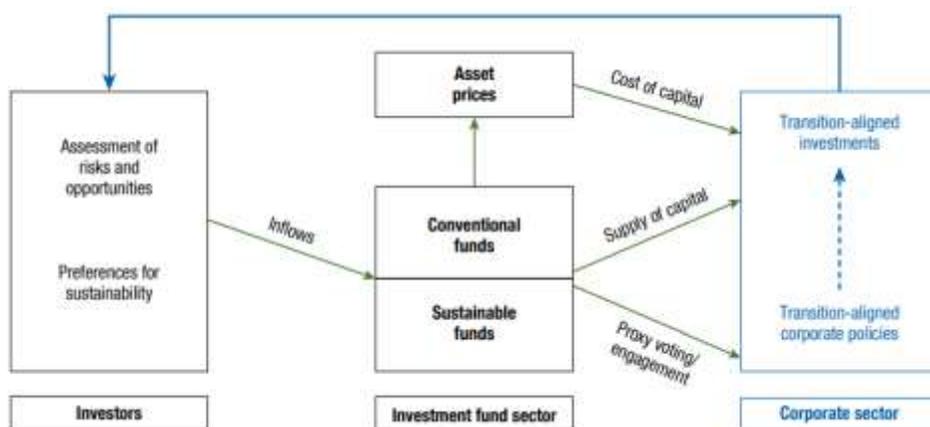
Investment funds have the potential to support sustainable growth and financial stability. In particular, investment funds that integrate environmental, social and governance (ESG) factors and focus on sustainability issues can speed up the transition to a green economy. This can be done through two main channels (Figure 9.1): First, investors make portfolio decisions based on their preferences for sustainability and their assessment of risks and opportunities, and these decisions create inflows into sustainable funds that increase the supply of capital available to firms supporting the transition. This in turn, reduces the cost of capital and

encourages transition- oriented investments geared toward emissions reductions (IMF, 2021a). An example of a thematic fund dedicated to reducing greenhouse gas emissions and helping countries adapt to climate change is the Green Climate Fund (GCF), which aims to mobilize large-scale funding to invest in low-emission and climate-resilient development. To date, a number of OIC countries are vulnerable to the varying impacts of climate change. In addition to the devastating social and environmental consequences, the economic output losses caused by climate change would disproportionately affect many poor regions of the world.

A new report by S&P Global (2022) that assesses the vulnerability of 135 countries to economic losses from physical climate hazards, found that lower- and lower-middle income countries are likely to experience GDP losses 3.6 times greater on average than wealthier countries. For example, Bangladesh and Pakistan’s exposure to forest fires, floods, major storms, and water shortages means that South Asia is at risk for 10-18% of its GDP. Central Asia, the Middle East and North Africa (MENA) and Sub-Saharan Africa also face significant losses. At the same time, countries in these regions also have less resilience, weaker institutions, and less financial capacity. Under these circumstances, OIC countries can benefit from climate-focused funds to adapt and thrive in the face of climate change.

Flows to sustainable funds can encourage investments geared toward reducing emissions. Through proxy voting and shareholder engagement, sustainable funds can influence corporate strategies to adopt more sustainable business models.

Figure 9.1: Sustainable Investment Fund and Transition to Green Economy



Source: IMF staff compilation

Investment funds are also one of the most important providers of the liquidity needed to keep capital markets functioning. Long-term investors in investment funds (such as sovereign wealth funds and pension funds) are able to hold assets in their portfolios in times of crisis, and thus play a counter-cyclical role. At the same time, it is important to note that while

EMDEs in particular have benefited from the rapid growth of capital flows intermediated by investment funds, potential reversals of investment flows are likely to create new risks to the financial stability of recipient countries (IMF, 2021b). Reallocations from risky to safe assets by global asset managers (following shocks) have an international dimension in the form of cross-border spillovers of market volatility that EMDEs need to manage appropriately when taking advantage of investment fund opportunities.

Following the success of the inaugural green sukuk issuance, as part of its scale response to COVID-19 for its member countries, the IsDB issued a Sustainability Sukuk in June 2020 with an initial amount of US\$ 1.5 billion to help member countries address pandemic-related challenges and contribute to critical interventions, with proceeds deployed to social projects under the IsDB's Sustainable Finance Framework (see Table 9.1). In March 2021, the IsDB issued its second and largest Sustainability Sukuk to date, worth US\$ 2.5 billion, to finance a green and resilient recovery. The proceeds of the Sustainability Sukuk will be allocated to finance/refinance green (10%) and social development projects (90%) that are eligible under the IsDB's Sustainable Finance Framework. As an alternate capital market instrument, sukuk can play a significant role in stimulating capital flows to green and sustainability-related projects in OIC countries.

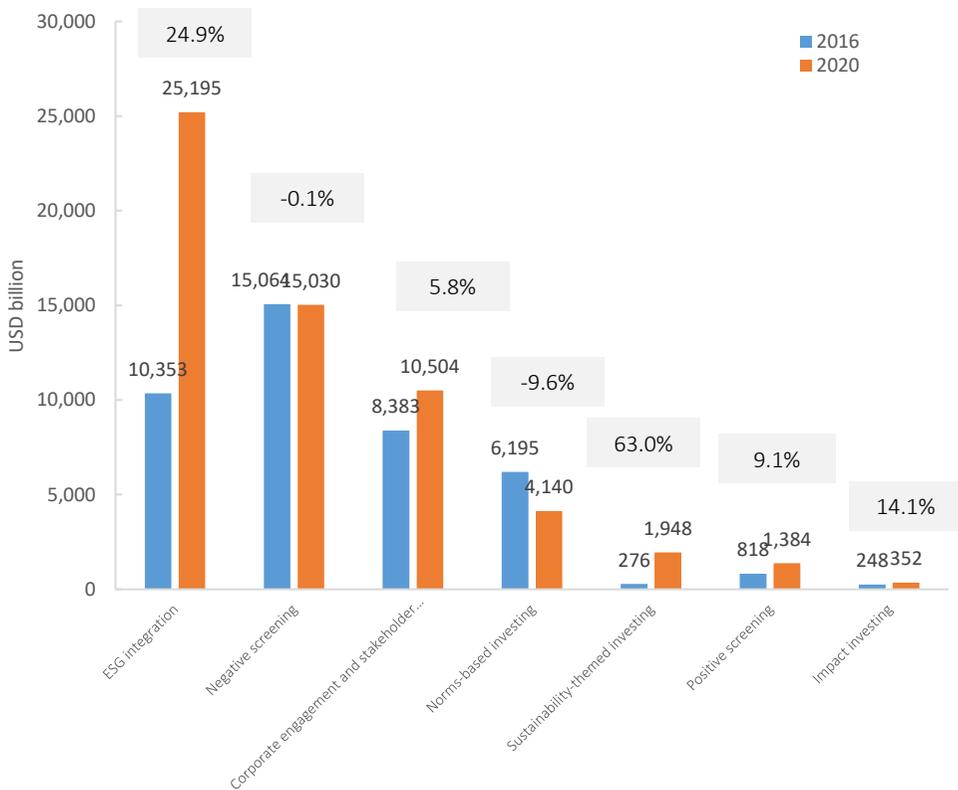
Table 9.1: IsDB Green Sukuk Impacts

- ✓ 1,025 MW of clean energy generation capacity installed in energy sector
- ✓ 3,233 GWh of clean energy generated per annum in energy sector
- ✓ 291 GWh/yr saved through energy efficiency projects
- ✓ 14,148,412 tCO₂e avoided annually in the energy sector
- ✓ 20,000 inhabitants (2,000 households) provided access to decent and affordable houses with electricity, potable water supply and protection against flood risks
- ✓ 69 hectares of urban development protected from flooding and water disaster
- ✓ 10,000 direct and indirect jobs created in flood protected zones
- ✓ 2,000 climate resilient, decent and affordable housing units constructed for urban poor
- ✓ 110,000 tCO₂e emissions reduced annually in the transport sector
- ✓ 80% reduction in number of disease patients due to unhealthy urban environment
- ✓ 406 Ha existing irrigation perimeters upgraded to address climate risks
- ✓ 315 Ha of new irrigation perimeters developed to build climate resilience
- ✓ 140 km of sewerage networks constructed, installed, and upgraded
- ✓ 1,400 Ha of agriculture land protected against flood risks
- ✓ 2,110 permanent jobs created for climate-smart farming activities
- ✓ 48,763 m³ of wastewater collected and treated daily

Source: Islamic Development Bank (2020a)

The need to accelerate the transition to an economy that truly addresses current global social and environmental challenges cannot be overstated. In recent years, sustainability considerations, which encompass environmental, social, and governance (ESG) concerns, as well as a growing commitment to net carbon reduction, have been increasingly integrated into the investment strategies and philosophies of corporations across the globe. One of the key ESG concerns is addressing climate change, which some estimates suggest is the greatest long-term threat: Global emissions must be cut in half by 2030 and reach net zero by 2050 to have a chance of keeping global temperature rise below 1.5 degrees Celsius, while EIA estimates that the global economy could shrink by 18% over the next 30 years if no action is taken to mitigate climate change (Climate Change, 2022). Other ESG concerns include promoting water and energy efficiency, human rights, equal opportunity, business ethics, board diversity and other goals that will contribute to the transition to a more sustainable world. Growing investor interest in ESG factors reflects the view that ESG issues – including risks and opportunities -- can affect the long-term performance of issuers and should therefore be appropriately considered in investment decisions. Overall, among sustainable investment strategies, ESG integration is currently the leading strategy, generating over US\$25 trillion in investments by 2020 (Figure 9.2).

Figure 9.2: Global Sustainable Investing Strategies (2016-2020)



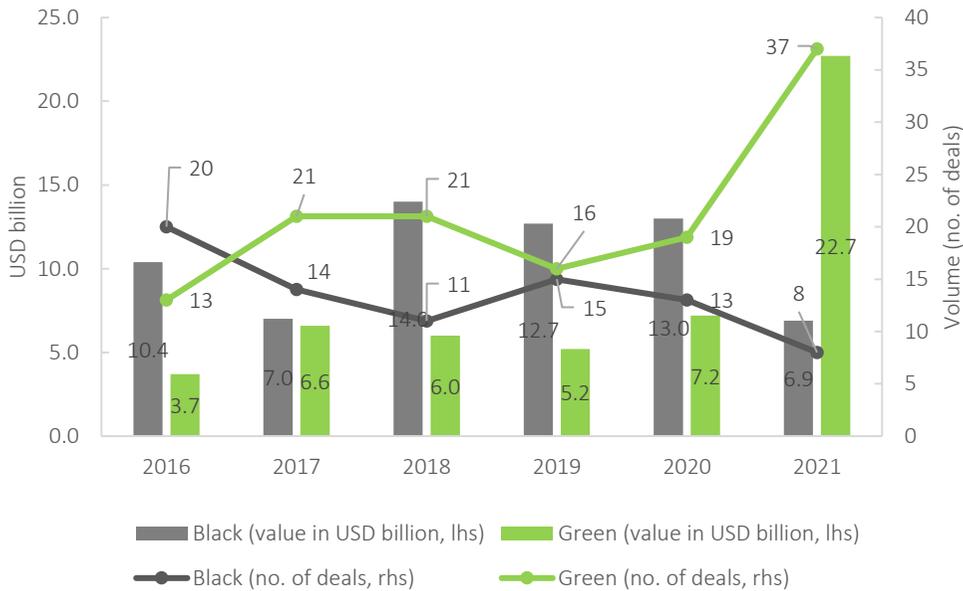
Sources: ESG Investing: Practices, Progress and Challenges 2020, Global Sustainable Investment Review 2020, EY

The investment fund sector is particularly relevant in this area, where sustainable funds have played an important role in seeking investments that generate positive and measurable social and/or environmental impact in addition to financial returns, while engaging in more effective and assertive management activities. In general, fund companies can integrate ESG into their processes in two ways. One is by introducing thematic funds in this area, and the other is by integrating ESG factors into their investment analysis for all funds. A common method used by fund companies to develop ESG strategies is screening, which employs filters to determine which companies or sectors should be included in a portfolio. For example, negative screening excludes high emitters of greenhouse gases, whereas positive screening targets only the lowest emitters.

To date, some of the world's largest investors have become leaders and have realigned their portfolios to incorporate ESG principles. One example is the One Planet Sovereign Wealth Fund (SWF) initiative, whose mission is to invest in the smooth transition to a low-carbon economy and address climate change risks and opportunities in the management of large, long-term and diversified asset pools. Founded by four of the OIC's largest SWFs (Kuwait Investment Authority, Abu Dhabi Investment Authority, Saudi Arabia's Public Investment Fund, and Qatar Investment Authority) and two other SWFs (New Zealand's Super Fund and Norway's Norges Bank Investment Management), the initiative lays the groundwork for aligning SWFs with ESG standards. Other institutional investors such as Malaysia's EPF (Box 9.1), have also recently announced their commitment to integrating sustainability into overall investment decision-making for the benefit of their socio-economic well-being and their ability to adapt to climate change. According to data from Global SWF, state investor investments in the ESG space surged to US\$ 22.7 billion in 37 different transactions in 2021, up from US\$ 7.2 billion reported in 2020 (Figure 9.3). Encouragingly, 2021 was the first year in which state-owned investors made more green investments than 'black' investments—more than three times the total value, as shown in Figure 9.3.

In the future, ESG and sustainable investing are projected to increase at a rapid pace. By 2025, approximately 33% of all global assets under management are expected to have ESG mandates, with ESG assets exceeding US\$ 53 trillion, up from US\$ 22.8 trillion in 2016. Currently, ESG funds account for 10% of global assets under management according to Refinitiv Lipper data. The future growth of ESG investments is also fueled by their favourable performance relative to non-ESG investments—portfolios incorporating ESG and sustainability frequently perform better over the long-term than those that do not (Lieberman, 2020). Data from U.S. financial services firm Morningstar found that ESG funds had lower volatility while providing good return on equity, as well as a longer lifespan: 77% of ESG funds that emerged a decade ago have persisted, compared to 46% of conventional funds.

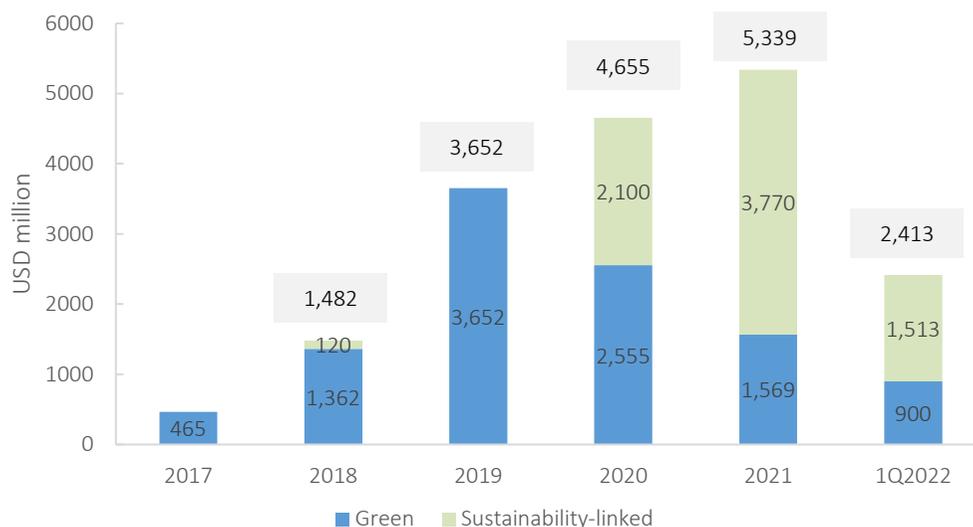
Figure 9.3: 'Black' vs. Green investments by State-Owned Investors (2016-2021)



Source: Global SWF Data Platform, Global SWF Annual Report

In recent years, OIC countries have made bold commitments and steps towards adopting a comprehensive sustainability agenda, which is expected to reshape the financial landscape in the region. For example, GCC markets are witnessing the rapid emergence of ESG investment opportunities, where governments and businesses that incorporate ESG principles into their economic diversification and development strategies, operations and financing are playing a key role in the push to expand more financial products and services related to ESG ratings, indices and funds. In this regard, the Islamic finance industry has responded: on the ESG sukuk issuance front, in 2021 alone, US\$ 5.34 billion of ESG sukuk were issued, a record high compared to previous years, with Saudi Arabia being the largest market for ESG sukuk, followed by Indonesia, Malaysia and United Arab Emirates. Notably, in 2021, the Jeddah-based Islamic Development Bank (IsDB) issued the world’s largest sustainability and ESG sukuk to date, where the US\$ 2.5 billion issuance positioned the bank as the largest issuer of sustainability sukuk, with a grand total of US\$ 5.2 billion (Figure 9.4) (Islamic Development Bank, 2020a). According to the Refinitiv Sustainable Islamic Finance App, the current market for outstanding ESG and green sukuk is over US\$ 18 billion (Table 9.2). Some OIC countries, like Malaysia, have started to pay greater attention to ESG consideration in the management of investment funds (Table 9.2).

Figure 9.4: ESG Historical Sukuk Issuance (2017 – 1Q2022)



Source: Sustainable Islamic Finance, Refinitiv

Table 9.2: ESG Sukuk Issuance in Selected OIC Countries (2017-1Q2022)

Country	Amount issued (US\$ million)
Saudi Arabia	7,929
Indonesia	4,332
Malaysia	2,343
United Arab Emirates	1,800
Bahrain	900
Bangladesh	351
Türkiye	350
Grand Total	18,005

Source: Sustainable Islamic Finance, Refinitiv

9.3 Backbone of Saving and Pension Planning

As noted earlier, investment funds play a central role in saving for important financial goals at the household, community, and national levels. Specifically, in pension planning, although people save for their retirement through insurance companies, pension schemes and employers, the money actually invested is primarily managed in investment funds. In this context, investment funds play a key social role as the primary vehicles for retirement savings by channeling retirement contributions to finance retirement benefits in a sustainable way.

Box 9.1: Employee Provident Fund (EPF) Malaysia Launches New Policies Surrounding ESG Considerations

Malaysia's largest institutional investor and the 16th largest public pension fund in the world, Employees Provident Fund (EPF), launched the Sustainable Investment Policy (SIP) and two additional policies, Priority Issues Policy and Priority Sectors Policy, in April 2022, to guide the fund in making better informed and holistic investment decisions by integrating environmental, social and governance (ESG) considerations, with the additional goal of preserving long-term member returns and contributing to a wider sustainability ecosystem. In detail, the EPF Sustainable Investment Policy is based on four key guiding principles to ensure consistency, predictability and transparency. The Priority Issues and Priority Sectors Policies complement the core policy by defining the fund's stance on two priority issues (climate change and worker welfare) and six key sectors (palm oil, oil and gas, mining, power generation, banking and construction). For the main policy, the EPF specified the following four key guiding principles:

1. Integrating ESG in the EPF's investment decision-making processes, providing a robust and comprehensive investment process that assesses an investment opportunity not only on the fund's financial upside potential, but also its performance on key ESG factors;
2. Play an active leadership role in ensuring investments within the EPF's portfolio are geared towards ESG compliance, while continuously improving its sustainability standards through responsible voting practices, ESG monitoring, as well as active engagements with investee companies and external fund managers;
3. Identifying ESG priorities and goals relevant to EPF, with reference to local and global goals and taking into account the fund's portfolio exposures. To accelerate these efforts, the EPF's Sustainable Investment Centre is responsible for developing, implementing, monitoring and reporting the annual progress towards its committed sustainability goals;
4. Recognizing that internal capability building is a key priority in the EPF's approach to sustainable investment in order to continue its transition to sustainable investing leadership. The EPF will conduct training and awareness programs, develop internal sustainability advisory capabilities, and establish a change management office to build a top-down culture of sustainability within the fund.

The pension fund's new SIP marks its evolution toward sustainable investor in its quest for full ESG compliance by 2030 and a climate-neutral portfolio by 2050. The EPF will also conduct training and awareness programmes, develop internal sustainability advisory capabilities, and establish a change management office to instil a top-down sustainability culture within the fund. All of EPF's 16 external fund managers signed the Sustainable Investment Pledge to solidify their commitment to including ESG considerations in their investment decision-making processes.

Source: EPF Press Release, Malaysia's Ministry of Finance

Overall, as a crucial driver of global capital flows to emerging market and developing economies (EMDEs) and underpinned by their critical role in economic activity, investment funds and their inherent benefits are well-positioned to create positive impact in OIC countries at the household, corporate and country levels. However, the breadth and depth of the investment fund sector in OIC countries varies considerably and is often fragmented, being primarily concentrated in a limited number of key jurisdictions. As retail and institutional investors better understand and desire the benefits of domestic and international diversification that investment funds can provide in addition to their salient features, the sector is poised to grow, especially in OIC countries where investment funds have had less market presence.

PART IV

CONCLUDING REMARKS AND POLICY IMPLICATIONS



10. Concluding Remarks

An overview of the recent investment figures in the OIC countries provides some important insights. First, the OIC countries, as a group, are far from their potential. This suggests that there is a large room for improvement in directing more investment to and stimulating investment in OIC countries. With the right investment incentives, FDI attraction policies and aggressive FDI promotion strategies, it is possible for many OIC countries to see a surge in both private investment and FDI. The improvement of the investment ecosystem could also play a significant role in encouraging the private sector activity and attracting more foreign investors in OIC countries.

Second, the analysis reveals that there is an unequal distribution of investments, whether measured in terms of private, public, or FDI activities. A group of few OIC countries have made more investments (public and private) and have been able to attract significant FDI projects. Moreover, a limited number of OIC countries have become major investors in terms of FDI given their high level of savings. Yet, many OIC countries need extensive investments to address the existing infrastructure gaps and provide better services for their populations. This creates a vicious circle of a gap between investment and savings with the help of international and institutional investments.

Third, competition in the FDI landscape has increased, especially among developing countries, in recent years. An increasing number of developing countries are implementing policies and developing incentives to attract more FDI and even developing PPP projects to accommodate more FDI. OIC countries, as a group, need to exert more efforts to be a destination for MNEs and host them in their respective countries which could bring in new technologies, create additional jobs and trigger economic growth. This could in turn increase the importance of OIC countries in the global FDI landscape, among other benefits.

Fourth, there are four productive sectors with a natural or comparative advantage have been identified in the in-depth sectoral analysis of the investment outlook report. These are Agriculture and Food; Textiles and Apparel; Mining and Construction and Petrochemicals, the other being the Islamic Financial Services sector. These key sectors have significant value chain potential because of the availability of requisite natural resources and enabling factors that could be exploited to upscale the production of finished products and services that could enhance the global competitiveness of OIC member countries and attract more investments. For instance, some OIC member countries are abundantly endowed with oil and gas resources, so that they have a decisive influence on the global energy market, provide opportunities for the development of petrochemical industry activities and form the basis for industrialization. Similarly, OIC member countries have vast arable land and favourable conditions for agriculture and food production, as well as factors conducive to the development of the mining and construction industries, while the by-products of agriculture,

oil and gas offer tremendous opportunities for the development of textile and apparel activities.

Fifth, investment funds are efficient financial vehicles that pool capital and make collective investments through a portfolio of instruments such as stocks, bonds and other securities in a broad range of international markets. EMDEs, in particular, have benefited from the rapid growth of capital flows intermediated by investment funds. Through various transmission channels, investment funds have proven to foster growth and sustainable development, contribute to long-term savings, and strengthen financial stability, as well as being an important source of short and long-term financing for financial institutions, corporates, and governments. Yet, given the magnitude of investment needs, only a handful of OIC countries have competitive and well-established investment funds. With the availability of many different types of tailored investment funds targeting specific financial and investment objectives, OIC countries must strive to examine and address the pitfalls of its nascent investment fund sector to further develop and capitalise on its benefits.

11. Policy Implications

11.1 Boosting Public Investment in OIC Countries

Properly targeted public investment can help to stimulate economic activity, aggregate demand, and productivity growth by improving human capital, encouraging innovation, and leveraging private sector investments by increasing returns. However, poor selection and management of investment projects can result in significant waste of resources and limit growth prospects. Therefore, public investment choices should be made on the basis of a careful evaluation of the costs and expected returns of the different options and should be managed effectively. Moreover, when governments engage in public investments under strict budgetary constraints, projects should be carefully evaluated for their economic and social returns. Governments should set up institutions capable of carrying out proper planning, cost-benefit analysis, as well as monitoring and evaluation of project implementation.

It is not easy for policymakers to optimally allocate public resources among different sectors and among different public investment projects. Setting strategic objectives and periodically reviewing progress towards those goals helps to assess the effectiveness of different public investment programmes. Relative allocations within and across investment programs should focus on increasing productivity and competitiveness, identifying areas highest social returns, and ensuring that externalities and spillover effects are significant.

To ensure the effectiveness of public investments, institutional mechanisms need to be strengthened to ensure the proper implementation of public investment projects and to develop enough flexibility to adapt to unforeseen circumstances. This also requires developing standards of good governance and transparency at every stage of project management from selection to procurement and financing. The delivery of productive investment projects after their completion requires good operations and maintenance management capacity, and the application of regulatory measures. The impact of key public investment programs on the poor should also be analysed to identify those projects that contribute most to poverty alleviation objectives in a cost-effective manner.

11.2 Stimulating Private Investment in OIC Countries

In order to stimulate long-term and large-scale private investment, significant improvements in the investment climate are needed. Each sector presents different challenges for private firms. Investment in manufacturing can be constrained by a lack of high-skilled labour and advanced technologies. In construction and trade, investment can be limited by burdensome regulations and lack of harmonisation of standards. In tourism, a lack of coordination between different service providers (airports, hotels, conference centres etc.) can hamper investment and growth. In transportation and communications, it is not always easy to obtain government permissions at the national and local levels.

With this in mind, identification of challenges at the sectoral level would be a conceivable approach to start with. The advantage of this approach is that it prioritizes sectors with significant potential for productivity gains and impact on the growth of the economy, and then develops a strategy to stimulate investment in these specific sectors. There are also important externalities between sectors, which can be tapped on. Investment in one sector can stimulate economic activities in other sectors. Promoting water and energy infrastructure accelerates efficiency of agricultural and manufacturing production, while improving telecommunications and transportation infrastructure strengthens the economic integration of poor and landlocked areas.

In addition to sector-specific measures to improve investment conditions, firm-specific actions should also be taken to encourage private investment. Special incentives should be provided for SMEs, particularly innovative ones, to promote their market entry and access to credit. Moreover, measures should be taken to strengthen key catalysts for investment, such as developing new approaches to the development of necessary skills, access to finance, and adequate infrastructure. In addition, private sector participation in public investments should be supported as it generates important efficiency gains. It enables the public sector to benefit from entrepreneurial dynamism, extended financing opportunities in an environment of budget constraints, and innovative and efficient private sector management styles.

While encouraging investment, special attention should be paid to promoting economic diversification. The heavy concentration of economic activities in a few sectors makes the economy vulnerable to external shocks. Diversification of the production base in industry, services and agriculture provides greater investment opportunities for domestic and international investors and strengthens the sustainability of the economy. Therefore, apart from government-led investment promotion policies, the private sector should be given the opportunity to invest and expand in any economic activity that generates growth and employment. This again requires an investment-friendly environment with facilitating regulations, a deep financial market, a labour force with the required skills and capabilities, solid infrastructure, access to technology and knowledge, and effective coordination channels between public authorities and private sector representatives.

A strategic approach to the promotion of private investment would include a number of policy dimensions. Policymakers should identify strategic sectors after a careful assessment of which economic sectors should be promoted based on their size, level of international competitiveness, expected productivity gains for the economy, the time and resources needed to invest, and the potential for further investment. Once priority sectors are identified, sector-specific barriers should be detected at a sufficiently detailed level to determine critical interventions and foster private sector development. Special needs of firms of different sizes or locations should be assessed in close cooperation with relevant parties and the necessary measures taken accordingly. A separate strategy should be developed to support key factors for productive investment, including financial capital, human capital, infrastructure, and technology. Finally, policymakers should conduct regular assessments of

policy interventions and cost-benefit analyses to make sure that these interventions are producing the desired outcomes. A clear coordination mechanism between different levels of government agencies should be established for effective implementation and follow-up of policy interventions.

11.3 Attracting More FDI to OIC Countries

Attracting more FDI has become a strategic national priority in many OIC countries given the increased competition and changes in the global economic order towards more digitalised and connected economies. In order to attract more FDI and retain existing investors, OIC countries should develop and implement policies not only directly related to the business environment, but also prepare more comprehensive policies, including regulatory and institutional reforms. In this way, they could reduce the country's risks for investors and provide a more enabling environment for doing investment and business on equal terms.

Addressing existing visible and invisible barriers, such as restrictive measures, high taxes for international trade and investment, and the informal economy, could also help OIC countries build a more attractive image for investors. Moreover, these policy efforts should be coupled with image-building efforts, which are usually undertaken by the country's national investment promotion agency (IPAs). In this respect, IPAs of OIC countries could be an important tool for effective communication with international investors and provide them with services to facilitate their investments.

In terms of the sequence of reforms and policy measures, to start with, OIC countries need to first identify and remove administrative barriers to FDI that constitute obstacles for them. Second, they need to have a better investor communication strategy, backed by a high level of political will to make reforms to improve the investment ecosystem. Third, reforms should be completed within a given timeframe and a list of priority reforms, including sectoral ones, should be prepared in consultation with businesses and investors, taking into account their views. It is also essential for OIC countries to develop policies to increase the contribution of FDI projects to sustainable development in host communities, for example by implementing the ESG criteria and other measures.

Enhancing intra-OIC FDI cooperation and unleashing its potential could be a game-changer in the FDI landscape of various OIC countries. It is therefore essential to improve the dialogue and cooperation between the OIC countries and their FDI agencies. In this regard, it is recommended that OIC countries take a proactive stance on ways and means to explore cooperation opportunities for national capacity building and encourage FDI projects from OIC home countries to other OIC host countries.

11.4 Improving Investment Ecosystem in OIC Countries

There are elements that influence the decision of investors, such as geography and climate, over which policymakers have no control. However, the majority of factors that constitute the 'investment ecosystem' are elements over which policymakers have control. In this respect,

policies and reforms determine the attractiveness and competitiveness of countries and could change the perceptions of investors in positive or negative ways. Therefore, improving the investment ecosystem is closely linked to the political will to create a more enabling environment. This requires a vision for change, a plan for implementing reforms, and key performance indicators. Policies and support measures from regional and international organisations, including multilateral banks could also facilitate the pace and success of reforms to remove barriers and obstacles to investment faced by investors. A set of tailored reforms specifically targeting various segments of investors or types of investments, such as foreign companies, state-owned enterprises, SMEs, and PPP projects could be instrumental in designing and implementing reforms to improve the investment ecosystem in OIC countries. Indeed, the expectations and needs of various stakeholders/investors could vary depending on the type and size of the investment.

Nonetheless, reducing macroeconomic volatility, addressing perceived risks for investors, facilitating trade and investment, easing business registration and operation procedures, reducing bureaucracy for economic agents, and investing in the digitalisation of public services, such as tax management and business registration could all help OIC countries to develop a more conducive ecosystem for boosting investment. Yet, country-level disparities exist within the OIC group. It is therefore not very easy to identify priorities at the national level. While some OIC countries are struggling to reduce country risks, others may have issues related to trade barriers and access to finance. In this regard, OIC countries need to undertake country-diagnostic studies to carefully assess their national investment ecosystem and list policy priorities. Moreover, the implementation of a series of reforms and measures should be monitored using a metric-based approach to achieve the expected positive results in a given period.

11.5 Mapping Priority Sectors for Investment in OIC Countries

Petrochemical

The petrochemical industry is and will continue to be of great importance to the OIC member countries. The first step into petrochemicals requires substantial investment and a long-term asset strategy, so establishing a significant footprint in this industry takes a long time. It is imperative for OIC member countries to prioritize investments for the development of the petrochemical industry, which requires substantial capital expenditure as well as effective coordination to establish links with the GVC of many other end-user industries. OIC member countries with a strategic advantage for petrochemical industry need to formulate a roadmap for a collaborative network of private and public entities at the OIC level to create the required market size and foster opportunities for thriving end-user industries. This in turn will drive innovation in the petrochemical and other industries. By adding more value in these high-impact industries, OIC countries will collectively be able to move from being oil-producing countries to being technology developers, while diversifying and expanding their product portfolios.

By fostering domestic demand and attracting end industries such as construction, packaging and automotive, OIC member countries can also ramp up their local formulation and finishing capacity – at the same time reducing import dependency. It is clear that OIC member countries currently have strengths in production and primary processing. However, there is considerable potential for added value further up the value chain, especially at the secondary processing stage, where they are currently weaker. Logically, OIC member countries need to make efforts to diversify and deepen their level of vertical integration and stimulate sufficient demand from end industries to drive this development forward. This requires proactive policy formulation and implementation to foster growth, innovation, value creation, employment, sustainability, and equality in all member countries.

Textile

To be included in the GVC for sustainable cotton growing and processing, OIC countries that are not yet well-established in the cotton business should invest in infrastructure and increase their knowledge. As for exploiting the opportunities in the global wool market, they can concentrate on maintaining and developing their position in the long run. As for the silk market, growing consumer demand and product innovation may offer OIC countries interesting prospects to occupy untapped market niches. In the leather industry, OIC countries might emerge as the leading suppliers for leather bags and accessories, the fastest growing market segment. They would also need to develop the necessary processing infrastructure. In the synthetic fiber sector, OIC Asian countries could benefit from the attraction of direct investments by global sourcing firms as well as investments in local capacity to create a local supplier infrastructure. Last but not least, local supplier networks could encourage production for the domestic market and reduce dependence on exports.

Agriculture

Three national clusters have been formed among OIC countries to better customize action plans and investment opportunities. Initiatives to promote education and innovation across OIC nations can help generate competitive advantages in the agri-food sector, utilizing existing know-how to improve quality and accelerate the development of sustainable solutions. OIC members such as Bahrain, Oman, the United Arab Emirates, and Saudi Arabia are examples of untapped potential, with less than 2% of their geographical area classified as arable. Alternative methods, such as vertical farming and anti-desertification projects, hold great promise, but they also require a lot of money. Other regions, such as Sub-Saharan Africa, have plenty of land but lack the know-how and resources to develop it. As other OIC member countries move in to develop production and export capacities, foreign direct investment could play a key role.

Mining and Construction

There are 18 key aspects of GVC potentials that are associated with opportunities, challenges and risks within the mining and construction industries at varying levels. However, five of them are very strategic for OIC member countries in terms of investment priorities and

opportunities including cement, iron and steel, gold, aluminum, and nickel. In the mining sector, two major trends are likely to increase demand. The increasing use of electronics built around the Internet of Things (IoT), and the expansion of e-mobility and renewable energy. The trend of incorporating more and more electronics into manufactured products is forecast to accelerate, driven by the so-called "Industry 4.0" – the fourth manufacturing revolution, which involves the use of interconnected smart systems, machine-learning, advanced analytics, augmented reality, artificial intelligence, etc. The enhanced connectivity offered by 5G technology, for example, requires metals with low electrical resistance.

Many OIC member countries are facing a shortage of housing and related infrastructure, with additional pressure from rapid population growth. OIC member countries are anticipated to exhibit an above industry average growth in construction by 2030. One obvious result will be an increase in the number of buildings, both commercial and residential. A less obvious implication is the impact that increased volumes will have on local authorities, who are responsible for providing construction companies the necessary permits as well as ensuring compliance. Furthermore, as technology is integrated into all construction, the complexity of integrating suppliers increases exponentially. It is important for OIC member countries to leverage the technology of 3D printing in construction, which provide numerous benefits, including reduction of cost of ownership and faster development timelines. In addition, two major trends are expected to significantly influence the direction and practices of the construction industry over the next decade – higher prevalence of pre-fabricated components, as well as a growing emphasis on the energy efficiency of buildings and construction materials manufacturing. Pre-fabrication refers to the assembly of components, ranging from individual parts to complete building rooms, in a factory rather than on site. These "pre-fab" sections are then transported to the construction site, where they are assembled and stacked. Developers face growing pressure on productivity, with clients demanding greater efficiency and shorter development timelines. As a result, the trend toward modular structures, which can save 30-50 % of the time compared to the conventional approach of building from raw materials.

11.6 Mobilizing Investment Funds in Addressing Investment Gaps in OIC Countries

Investment funds and capital flows are instrumental to mobilize investors and address investment gaps. While public and private investment via properly structured investment funds remains vital for growth, several conditions must be met for the sector to flourish. In any country, the availability of efficient capital markets, coupled with sound and appropriate regulatory frameworks, is an essential precondition for an active investment funds industry. Stocks, bonds, and other securities markets need to be governed by laws to prevent fraud, promote transparency, foster market liquidity, and ensure the efficient trading and clearing of securities. Fund regulation is also important to ensure investor protection, provide adequate information for informed decision-making, and limit potential conflicts of interest

between fund sponsors and investors. With respect to cross-border flows to OIC countries intermediated by investment funds, a sound regulatory structure with proper tools and policy options will better monitor and manage the risks and vulnerabilities that may arise and affect financial stability. In this case, it should be noted that a combination of both recipient and source country policies, deployed effectively, is of utmost importance to help mitigate cross-border spillovers. Ensuring that these basic building blocks are in place, OIC countries will be better equipped to catalyze productive investment and stimulate growth via investment funds.

While it is understood that the effectiveness of policy tools and measures depends on country-specific contexts that give rise to a unique set of risks and challenges, improving the overall investment ecosystem through sufficient, broad-based policy reform must be a priority for OIC countries. Other policy priorities could include better alignment of investor incentives, strengthening the integrity, stability and resilience of domestic financial sectors and their overall development, safeguarding a fair and effective legal system, and creating efficient labour and product markets.

Annexes

Annex I: Country Group Classifications

OIC Member Countries (57):

Afghanistan (AFG)	Albania (ALB)	Algeria (DZA)
Azerbaijan (AZE)	Bahrain (BHR)	Bangladesh (BGD)
Benin (BEN)	Brunei Darussalam (BRN)	Burkina Faso (BFA)
Chad (TCD)	Comoros (COM)	Cameroon (CMR)
Djibouti (DJI)	Egypt (EGY)	Cote d'Ivoire (CIV)
Gambia (GMB)	Guinea (GIN)	Gabon (GAB)
Guyana (GUY)	Indonesia (IDN)	Guinea-Bissau (GNB)
Iraq (IRQ)	Jordan (JOR)	Iran (IRN)
Kuwait (KWT)	Kyrgyz Republic (KGZ)	Kazakhstan (KAZ)
Libya (LBY)	Malaysia (MYS)	Lebanon (LBN)
Mali (MLI)	Mauritania (MRT)	Maldives (MDV)
Mozambique (MOZ)	Niger (NER)	Morocco (MAR)
Oman (OMN)	Pakistan (PAK)	Nigeria (NGA)
Qatar (QAT)	Saudi Arabia (SAU)	Palestine (PSE)
Sierra Leone (SLE)	Somalia (SOM)	Senegal (SEN)
Suriname (SUR)	Syria* (SYR)	Sudan (SDN)
Togo (TGO)	Tunisia (TUN)	Tajikistan (TJK)
Turkmenistan (TKM)	Uganda (UGA)	Türkiye (TUR)
Uzbekistan (UZB)	Yemen (YEM)	United Arab Emirates (UAE)

* Syria is currently suspended from OIC membership.

Non-OIC Developing Countries (98):

Angola (AGO)	Antigua and Barbuda (ATG)	Argentina (ARG)
Armenia (ARM)	The Bahamas (BHS)	Barbados (BRB)
Belarus (BLR)	Belize (BLZ)	Bhutan (BTN)
Bolivia (BOL)	Bosnia and Herzegovina (BIH)	Botswana (BWA)
Brazil (BRA)	Bulgaria (BGR)	Burundi (BDI)
Cabo Verde (CPV)	Cambodia (KHM)	Central African Republic (CAF)
Chile (CHL)	China (CHN)	Colombia (COL)
D.R of the Congo (COD)	Republic of Congo (COG)	Costa Rica (CRI)
Croatia (HRV)	Dominica (DMA)	Dominican Republic (DOM)
Ecuador (ECU)	El Salvador (SLV)	Equatorial Guinea (GNQ)
Eritrea (ERI)	Ethiopia (ETH)	Fiji (FJI)

Georgia (GEO)	Ghana (GHA)	Grenada (GRD)
Guatemala (GTM)	Haiti (HTI)	Honduras (HND)
Hungary (HUN)	India (IND)	Jamaica (JAM)
Kenya (KEN)	Kiribati (KIR)	Kosovo (Unassigned)
Lao P.D.R. (LAO)	Lesotho (LSO)	Liberia (LBR)
North Macedonia (MKD)	Madagascar (MDG)	Malawi (MWI)
Marshall Islands (MHL)	Mauritius (MUS)	Mexico (MEX)
Micronesia (FSM)	Moldova (MDA)	Mongolia (MNG)
Montenegro (MNE)	Myanmar (MMR)	Namibia (NAM)
Nauru (NRU)	Nepal (NPL)	Nicaragua (NIC)
Palau (PLW)	Panama (PAN)	Papua New Guinea (PNG)
Paraguay (PRY)	Peru (PER)	Philippines (PHL)
Poland (POL)	Romania (ROU)	Russia (RUS)
Rwanda (RWA)	Samoa (WSM)	São Tomé and Príncipe (STP)
Serbia (SRB)	Seychelles (SYC)	Solomon Islands (SLB)
South Africa (ZAF)	South Sudan (SSD)	Sri Lanka (LKA)
St. Kitts and Nevis (KNA)	St. Lucia (LCA)	St. Vincent and the Grenadines (VCT)
Swaziland (SWZ)	Tanzania (TZA)	Thailand (THA)
Timor-Leste (TLS)	Tonga (TON)	Trinidad and Tobago (TTO)
Tuvalu (TUV)	Ukraine (UKR)	Uruguay (URY)
Vanuatu (VUT)	Venezuela (VEN)	Vietnam (VNM)
Zambia (ZMB)	Zimbabwe (ZWE)	
Developed Countries (39):		
Australia (AUS)	Austria (AUT)	Belgium (BEL)
Canada (CAN)	Cyprus (CYP)	Czech Republic (CZE)
Denmark (DNK)	Estonia (EST)	Finland (FIN)
France (FRA)	Germany (DEU)	Greece (GRC)
Hong Kong (HKG)	Iceland (ISL)	Ireland (IRL)
Israel (ISR)	Italy (ITA)	Japan (JPN)
Korea, Rep. (KOR)	Latvia (LVA)	Lithuania (LTU)
Luxembourg (LUX)	Macao SAR (MAC)	Malta (MLT)
Netherlands (NLD)	New Zealand (NZL)	Norway (NOR)
Portugal (PRT)	Puerto Rico (PRI)	San Marino (SMR)
Singapore (SGP)	Slovak Republic (SVK)	Slovenia (SVN)
Spain (ESP)	Sweden (SWE)	Switzerland (CHE)
Taiwan (TWN)	United Kingdom (GBR)	United States of America (USA)
* Based on the list of advanced countries classified by the IMF.		

Annex II: Geographical Classification of OIC Countries

Sub-Saharan Africa (21): OIC-SSA		
Benin	Gambia	Nigeria
Burkina Faso	Guinea	Senegal
Cameroon	Guinea-Bissau	Sierra Leone
Chad	Mali	Somalia
Comoros	Mauritania	Sudan
Côte d'Ivoire	Mozambique	Togo
Gabon	Niger	Uganda
Middle East and North Africa (19): OIC-MENA		
Algeria	Kuwait	Saudi Arabia
Bahrain	Lebanon	Syria*
Djibouti	Libya	Tunisia
Egypt	Morocco	United Arab Emirates
Iraq	Oman	Yemen
Iran	Palestine	
Jordan	Qatar	
*Syria is currently suspended from its OIC membership.		
East and South Asia and Latin America (9): OIC-ESALA		
Afghanistan	Guyana	Maldives
Bangladesh	Indonesia	Pakistan
Brunei Darussalam	Malaysia	Suriname
Europe and Central Asia (8): OIC-ECA		
Albania	Kyrgyzstan	Turkmenistan
Azerbaijan	Tajikistan	Uzbekistan
Kazakhstan	Türkiye	

Annex III: Textile and Apparel Value Chains in Selected OIC Countries

Annex III.1: Opportunities for Upgrading the Textile Industry as the Turkish Economy's Driving Force

Türkiye's integration into the global textile chain has been successful over the past 30 years. Türkiye's textile and apparel industry was primarily focused on meeting domestic demand from the 1930s through the 1980s. Türkiye's initial advantages included cotton, silk, traditional wool manufacturing capabilities, and the ability to grow natural raw materials. With additional investment in the 1990s, fabric and yarn manufacturing capacity increased dramatically. The industry has undergone a structural transition, especially since the 2000s, in line with the procurement policy of the large purchasing organizations. With additional import duties, incentives for branding, advertising, and design, minor gains in production and exports have been documented since 2011.

Textile components, technical components, industrial products, household textiles, and apparel are all subcategories of the textile sector. In terms of product categories, apparel exports totalled US\$17.7 billion, apparel component exports (fabric, yarn, and apparel fibers) totalled US\$6.2 billion, non-apparel final product exports (floor coverings, linens) and industrial products totalled US\$4 billion, and non-apparel component exports of miscellaneous fabric and yarn totalled US\$0.9 billion.

Throughout the period from 2003 to 2018, Türkiye had a very high demonstrated comparative advantage in the manufacturing of textiles, apparel and footwear, leather, luggage, and associated products, as shown below. However, despite the fact that all three businesses have remained above the barrier, the RCA for leather, luggage, and associated products manufacturing has significantly fallen over the last 16 years.

Challenges and Recommendations

Challenges

The textile industry's dependence on imports leads to higher prices and reduces Türkiye's value added in the manufacturing process. Türkiye must improve in the Textile GVC by manufacturing more value-added products and services due to high energy, water, and labour costs.

To meet global expectations in textile GVC, reliability is essential. Turkish businesses can take advantage of their comparative advantages in production and design to remain reliable producers.

The adoption of new technologies in the manufacturing process for process improvement necessitates a digitally skilled workforce.

Numerous corporate groups represent the textile industry, and cooperation is essential for successful marketing, branding, and end-market upgrading initiatives.

Recommendations

The Islamic Development Bank study (2020b) demonstrates that a stage-by-stage examination of value addition, from raw materials to sales, can help identify specific interventions for upgrading Türkiye's textile GVC.

Türkiye can add more value to the textile production process by focusing on branding, upgrading processes, and considering linkages with other industries such as automotive and medical products, as well as create a sustainable eco-system by reducing energy and water consumption, recycling waste in textile production, and forming a circular value chain, according.

These recommendations can be backed up by a comprehensive analysis of GVC in the field and by meetings with industry stakeholders in the public and private sectors.

Annex III.2: Bangladesh in the Global Value Chain of Apparel

For a variety of reasons, Bangladesh's garment industry is vital to the country's overall economy. For years, the sector has been at the forefront of the country's exports. From 3.9 % of overall exports in 1984 to 83.5 % in 2018, the garment sector has rapidly increased its share of total exports. Apparel exports increased by 225.4 % between 2008 and 2018, from US\$11.9 billion to US\$38.8 billion. About 3.5 million to 4.5 million people are employed in the garment industry, 60 % of whom are women (Centre for Policy Dialogue, 2019). Since the early 1980s, the number of garment factories has steadily increased, reaching 4,621 in 2019 on the official list, with an average of 650 workers per business. With an average of 55 workers working in each facility, 32 % of the subcontractors/factories are projected to be informal (Center for Business and Human Rights, 2015). Knitwear and sweater manufacturers account for about 40% of factories, while woven garment manufacturers account for the remaining 60%.

Advantages, Challenges and Recommendations

With an abundance of cheap labour, adaptable factories, duty-free access to EU countries, and preferential trade agreements (PTA) with countries such as India, China, and Korea, Bangladesh's apparel sector offers both strengths and opportunities. The high degree of domestic ownership also suggests that there are opportunities for improvement in the future. However, there are a number of challenges, including inadequate infrastructure and issues with industry standards.

Advantages

Bangladesh's apparel factories have much lower monthly labour costs than those major countries with large-scale production capabilities, such as China, India, and Vietnam. Despite the fact that Bangladeshi banks have a relatively high loan rate, Bangladeshi textile companies remain competitive in terms of electricity and water expenses. Bangladesh also has the second-largest number of apparel factories in the world, after China, which allows it to accept

large-scale production orders for a variety of products. The EU continues to be the most popular destination for products made in Bangladesh. The fundamental reason for this is that Bangladeshi textile products enjoy zero tariff access to EU countries, but products from competing countries such as China, India, and Vietnam are subject to significant tariffs.

Challenges and Recommendations

Despite its capabilities, Bangladesh's apparel industry faces many obstacles. Bangladesh's inadequate infrastructure, such as energy, transportation, and port services, presents many obstacles for industry stakeholders.

The apparel industry continues to rely on low-skilled workers and mid-level managers from abroad, requiring the development of local talent. Importing raw materials and inputs from other countries results in longer lead times, higher prices, lesser value-added, and therefore less competitiveness with growing competitors who are becoming more efficient at lower costs.

Furthermore, Bangladesh's reputation as a suitable garment sourcing destination may be affected negatively due to existing factory safety regulations, health and working conditions, and climate change susceptibility.

A key challenge is market and product concentration. Bangladesh relies on preferential trade agreements to access international markets. As a result, exports are restricted to a small number of destinations. Bangladesh's lack of market and product diversification could make it vulnerable to global shocks such as recessions and pandemics, as well as limit the transfer of knowledge and experience to local actors.

A more recent challenge is the spread of the COVID-19 pandemic, which has disrupted global supply networks. The Bangladesh government attempted to address the problem by providing low-interest loans to firms to cover salaries. Manufacturers, on the other hand, face a greater challenge in the form of buyer cancellations and the need to work under socially distanced conditions in order to meet commitments and avoid losing more contracts, which may require manufacturers to work in shifts to provide the space for social distancing (Woodruff C., 2020). This could result in higher labour and production costs.

Annex IV: The Agri-Food Value Chain in Selected OIC Countries

Annex IV.1: Türkiye in the Global Value Chain of Fresh Fruit and Vegetables

Türkiye is trying to become more integrated into the global Global Value Chains (GVC) of agriculture. Agriculture accounts for 6% of GDP and is a key source of employment, with 19% of the Turkish workforce involved in the sector. Agriculture is one of the main topics of the 11th Development Plan, which took effect in July 2019 and has a number of objectives, including food safety and security, rural development, and sector competitiveness. Improving agricultural performance is a particularly essential approach for reducing socioeconomic disparities in the 81 provinces of Türkiye.

Despite significant agricultural production, Türkiye is a net importer of important cereals and pulses. Only a portion of US\$64 billion in production was exported, and Türkiye has become a net importer of essential cereals and pulses. Nevertheless, the industry accounts for 10% of overall exports, and Türkiye is a major supplier of hazelnuts, apricots, figs, and fresh vegetables such as tomatoes and cucumbers. Iraq, Syria, and European Union countries are among the main destinations for fresh fruits and vegetable exports.

Annex IV.2: Nigeria in the Cocoa-Chocolate Global Value Chain

Nigeria primarily participates in the Cocoa-Chocolate GVC as an exporter of cocoa beans and, to a lesser extent, cocoa ingredients. Nigeria is the world's fourth-largest producer of cocoa beans, accounting for about 5.6 % of total production (ICCO, 2018). Cocoa is grown on an estimated 800,000 hectares by almost 300,000 smallholder farmers on plots ranging from 2 to 5 hectares.

Around 14 states in southern Nigeria are involved in production. Ondo, Cross River, Osun, Ekiti, and Abia are among the largest cocoa producing states in Nigeria. Ondo and Cross River states provide almost 72 % of Nigeria's total cocoa production (PIND, 2019). Cocoa is the world's second-largest non-oil export commodity, accounting for 30% of agricultural exports, employing around 2 million people and generating significant foreign exchange earnings (NEPC, 2020).

Challenges and Recommendations

Challenges

- a) Inadequate agricultural inputs are a widespread problem due to inefficient methods of input utilization, CRIN's limited capacity to supply and distribute high-yielding seedlings to replace plantations, and a lack of research and development.
- b) Domestic demand for cocoa is likewise low, and processing capacity utilization is low.
- c) Affordability of farmland and resources. Poor access roads and a lack of irrigation, for example.
- d) Farmers are compelled to accept lower prices due to the increased risk and cost of selling more remunerative buyers because of high transportation costs to buying centers.
- e) Inadequate training in seedling development and propagation, fertilizer, pest and soil management.
- f) Farmers frequently encounter issues with access to and cost of financing.
- g) The local cocoa value chain is made up of a significant number of small farmers who have no authority and are price takers, as well as a highly concentrated section of exporting companies that set the price and quality criteria and act as the main player.

Recommendations

- In certain states, make targeted investments to strengthen farming and processing infrastructure. Both the farming and processing industries are hampered by insufficient and inadequate infrastructure. Farmers' access to markets is hampered by a lack of rural

roads, and local marketing transportation expenses are considerable. In addition, poor drying, fermentation, and storage facilities result in poor bean quality. In this regard, there will be two types of investments. First, capital investments in public goods, mainly rural feeder and secondary highways, will be made with a focus on high-production regions. The second type of investment will be to supply agricultural cooperatives with primary processing facilities, such as artificial fermentation equipment, drying floors, and common storage facilities.

- Improve the sector's organization to better coordinate and achieve strategic growth. Prior to 1986, the Cocoa Board played an important role in organizing the growth of the industry. However, with the advent of oil and the dismantling of the Cocoa Board, no single agency has yet been able to assume position. The Cocoa Association of Nigeria, which was set up as a private sector organization to take over the work of the Cocoa Board, has proved ineffective. Traders and processors continue to dominate the market. Various state governments pursue their own non-coordinated policies for the development of the sector in their respective regions. There is a lack of a national body that could lead policy initiatives to help the sector. Governments have sought to institutionalize such bodies in the past, as with the Cocoa Program in 2012.

In addition to the aforementioned broad structural recommendations, the following specific policy recommendations are also recommended to pursue the following upgrade paths.

- a) Implement a program to improve cocoa productivity and production with four components: (i) training farmers on good agricultural practices using the Farmer Field School methodology, (ii) improving old plantations, (iii) expanding production through intercropping or establishing new estate plantations for young farmers, and (iv) promoting farmer service centers based on farmer cooperatives.
- b) Create and implement training programs to assist smallholders in obtaining UTZ or private certificates from leading firms.
- c) Support cocoa processors by introducing trade finance channels.

Annex IV.3: Indonesia in the Cocoa-Chocolate Global Value Chain

Indonesia is a major cocoa producer, but exports have remained stable between 2008 and 2018, with the product composition significantly shifting to more processed exports, due to Indonesia's concerted policy of functional upgrading to higher value-added cocoa processing segments, such as cocoa bean grinding and processing. This transition has resulted in the complete replacement of upstream cocoa bean exports increased exports of midstream processed cocoa, particularly cocoa butter, whose unit prices are now comparable to those in the Netherlands and Germany.

While Indonesia's significant processed cocoa exports to advanced cocoa processing hubs like the Netherlands demonstrate the country's successful end-market upgrading, despite

penetrating large and growing Asian markets such as China and India, Indonesia's share of their Cocoa-Chocolate imports remains low.

Challenges and Recommendations

Challenges

Due to a lack of adequate cultivation and post-harvest skills, as well as a lack of warehousing and logistics infrastructure, on-farm productivity is low, resulting in low production and poor bean quality. Process improvement, particularly into certified and FFC cocoa, will allow smallholders to gain long-term access to the cocoa market, reduce price volatility, promote local value addition in downstream manufacturing, and increase employment and revenue.

End Market Upgrading can be achieved by allowing world-leading chocolate manufacturers to set up their factories in Indonesia to serve growing domestic and regional markets and increase exports of high-value chocolate products in the long run, with associated spillover effects in terms of technology and know-how. However, chocolate manufacturers are unable to access untapped domestic and regional markets due to a lack of governmental incentives, high input prices, especially for sugar, and weak cold chain infrastructure. Other cross-cutting challenges include the lack of a consistent industrial policy, which results in the security of cocoa bean supply for an already overcapacity midstream sector, inconsistent policy incentives across the chain, and the absence of comprehensive institutional monitoring.. The availability of accurate data along the value chain is also a challenge.

Recommendations

- a) One of the proposed cross-cutting policy recommendations is to establish a producer group through the OIC with the goal of providing a livelihood income to cocoa farmers and assisting in the adoption of sustainable cocoa production in Member Countries that account for 65 % of global cocoa production.
- b) The second recommendation is to develop a private-sector-led industrial drive to scale up Cocoa Sustainability initiatives and accompanying on-farm productivity improvements. The OIC Group might help improve the capacity of a global agency like the Indonesian Cocoa Board (DEKAINDO), to finance agricultural input cooperatives, and provide support to the private sector to fill critical gaps in the value chain.
- c) The third recommendation is to support cocoa processing agglomerations and chocolate manufacturing clusters by allowing investments in Smart Ports with modern and efficient transportation and storage systems. This would replicate Antwerp's success in ports like Gerisk in Indonesia and Klang in Malaysia.
- d) The fourth recommendation is to create collaborative R&D facilities between various stakeholders, including producer cooperatives, world leading companies, universities, and the public sector, to promote value chain upgrading.
- e) Lastly, building farm-level infrastructure for warehousing, bean fermentation, and market access through farm to market infrastructure could help the sector to avoid post-harvest losses.

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