Journal of Accounting, Finance, Economics, and Social Sciences
Vol 9, No 1, January - June 2024, pp.43-58
Received: Apr 2024 | Revised: May 2024 | Accepted: Jun 2024
DOI: https://doi.org/10.62458/jafess915

Comparative Analysis of Egypt's National Competitiveness: An Evaluation Using International Economic Indicators

Karim Hamza *

ABSTRACT

This study aims to assess Egypt's national competitiveness, using international economic indicators and benchmarks to help policymakers set strategies for improvement. The study utilized a comparative analysis method by employing specific international indicators and benchmarks, namely the Global Competitiveness Index (GCI) of the World Economic Forum, the Global Innovation Index (GII) of the World Intellectual Property Organization, and the Ease of Doing Business of the World Bank. These outcomes were compared with those of three primary regional groups: Middle East and North Africa (Arab Countries), Lower Middle-Income countries, and Sub-Saharan African countries. Despite Egypt's progressive economic development, the country still performs weakly in international economic indicator rankings compared to the selected regions. However, this also suggests significant potential for improvement in Egypt's national competitiveness. Further in-depth analysis is needed to assess Egypt's national competitiveness by examining the outcomes of these indicators using Porter's Diamond model. This will provide a more comprehensive understanding of Egypt's national competitiveness performance and inform strategies for enhancing its national competitiveness.

Keywords: National competitiveness; International indicator benchmark; Egypt; Economic reform; Developing countries

INTRODUCTION

Egypt has implemented various economic development programs despite its political, economic, and social challenges, particularly from 2011 to 2016. While these programs contributed to general economic improvement, they have not fully optimized Egypt's national competitiveness. Consequently, Egypt continues to encounter challenges in maintaining a favorable position in international economic indicators, particularly those related to competitiveness and economic development (EIU, 2021; World Bank, 2020).

This study aims to assess Egypt's modern economic performance for 2019 and 2020, identify the country's strengths and weaknesses, and understand the key drivers necessary to improve and develop national competitiveness. This study sheds light on Egypt's national competitiveness elements by comparing Egypt's economic performance with international benchmarks such as the Global Competitiveness Index, Global Innovation Index, and Ease of Doing Business.

The study compares Egypt's economic performance with that of other countries in the region using a quantitative comparative analysis. The paper is structured into four main parts:

1. Providing an overview of Egypt's economic development, including its main economic performance indicators and elements.

* Karim Hamza, PhD, American University in Cairo
Email: karimhamza@aucegypt.edu

2. Analyzing Egypt's economic performance in international benchmarking related to National Competitiveness, primarily focusing on the Global Competitiveness Index of the World Economic Forum (WEF), Global Innovation Index of the World Intellectual Property Organization (WIPO), and Ease of Doing Business of the World Bank, to identify the strengths and weaknesses of its national competitiveness elements.

3. Comparing Egypt's economic performance with three main regional groups: Middle East and North Africa (Arab Countries), Lower Middle-Income countries, and Sub-Saharan African countries.

4. Providing an initial assessment of Egypt's national competitiveness performance compared to the targeted regions.

EGYPT'S MACROECONOMIC PERFORMANCE

Egypt is classified as an emerging market economy by the International Monetary Fund (IMF) and is considered one of the "CIVETS" and "Next 11" countries. This indicates that Egypt has a dynamic and diverse economy, a young growing population, a geo-strategic location, and the potential to catch up with leading developed economies (EUROMONITOR, 2008; Economist Intelligence Unit (EIU), 2010; Vadra, 2018).

Table 1: Comparing economic groups

Group	Advanced economies	Growing economies	Emerging markets	
Name	**G7**	**BRICS**	**CIVETS**	**N11, or "Next 11"**
Countries	• Canada • France • Germany • Italy • Japan • United Kingdom • United States • European Union	• Brazil • Russia • India • China • South Africa • Saudi Arabia • UAE • **Egypt (2024)** • Ethiopia • Argentine	• Colombia • Indonesia • Vietnam • Egypt • Turkey • South Africa	• Bangladesh • Egypt • Indonesia • Iran • Korea • Mexico • Nigeria • Pakistan • Philippines • Turkey • Vietnam
Organized by	Participating countries	Participating countries	Economist Intelligence Unit	Goldman Sachs

Source: Author's interpretation

Egypt was one of the few emerging market countries that experienced a positive growth rate in 2020. As a result of the government's swift and prudent policy response, coupled with the International Monetary Fund's (IMF) support, the Egyptian economy showed resilience in the face of the pandemic (IMF, 2021). However, Egypt still faces high public debt and significant financing needs. Therefore, Egypt needs to reduce the role of the state in the economy, ensure a suitable business environment for all firms, improve the business environment, increase Egypt's integration into global trade by reducing trade barriers, ensure predictability of customs procedures to unleash Egypt's enormous growth potential, and reduce poverty and improve inclusiveness (IMF, 2021).

Egypt's Gross Domestic Product (GDP) growth rate was steady until 2014, before the Egyptian pound devaluation in 2016. After the currency devaluation in 2016, the economy suffered a strong hit due to high inflation and interest rates. The GDP started to recover its growth by 2018 due to the increase in foreign investment and IMF support (IMF, 2021).

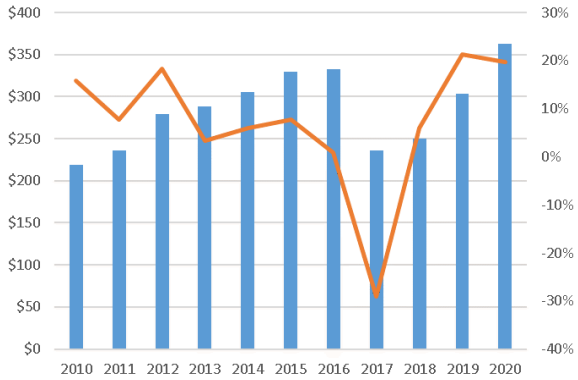


Figure 1: Egypt's GDP in billion and growth rate
Source: Data extracted by the author from the World Bank dataset for GDP 2020 ranking.
https://datacatalog.worldbank.org/dataset/gdp-ranking

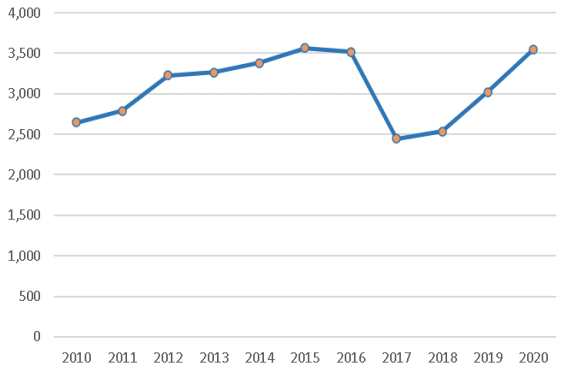


Figure 2: Egypt's GDP per capita growth rate in USD
Source: Data extracted by the author from the World Bank dataset for GDP per capita 2020 ranking.
https://data.worldbank.org/indicator/NY.GDP.PCAP.CD

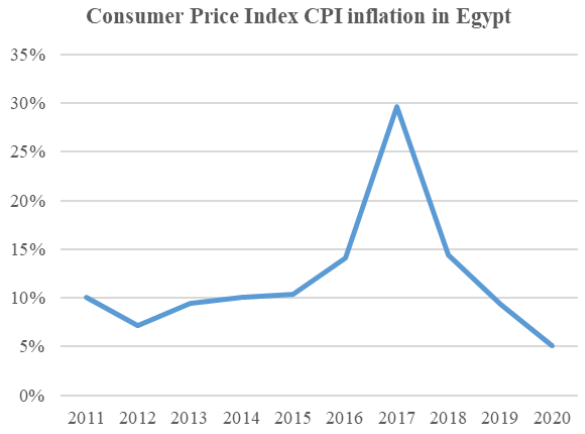
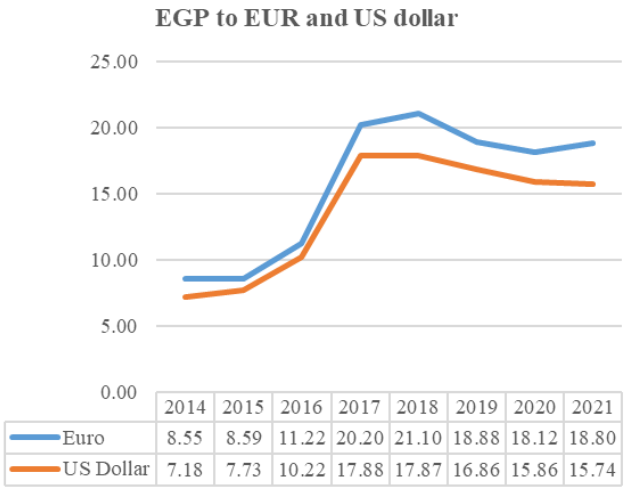


Figure 3: Consumer Price Index (CPI) inflation in Egypt
Source: Data extracted by author from the Central Bank of Egypt (Central Bank of Egypt, 2021).



	2014	2015	2016	2017	2018	2019	2020	2021
Euro	8.55	8.59	11.22	20.20	21.10	18.88	18.12	18.80
US Dollar	7.18	7.73	10.22	17.88	17.87	16.86	15.86	15.74

Figure 4: EGP to EUR and US Dollar
Source: Data extracted by the author from the Central Bank of Egypt (Central Bank of Egypt, 2021).

In terms of ranking, Egypt's GDP was 363 billion in 2020, according to World Bank data, which ranked 31st globally (2020). It is the third highest in the Arab countries after Saudi Arabia's 700 billion, the United Arab Emirates' 421 billion, and the second largest in Africa after Nigeria's 432 billion (World Bank, 2020).

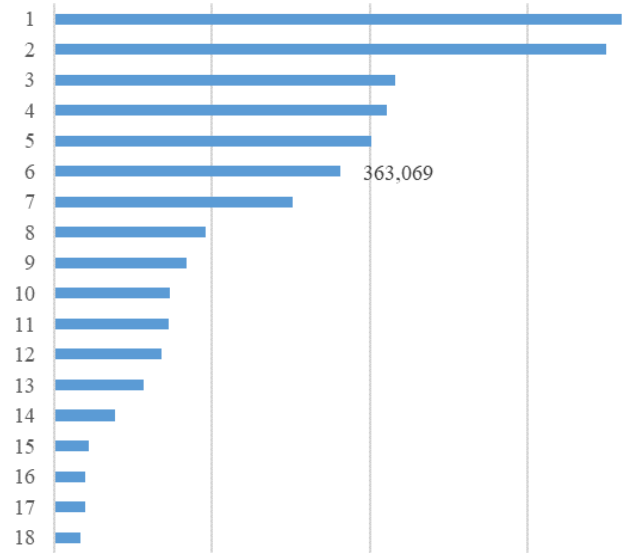


Figure 5: Egypt's GDP in 2020 compared to selected countries in the region
Source: Data extracted by the author from the World Bank dataset for GDP 2020 ranking.
https://datacatalog.worldbank.org/dataset/gdp-ranking

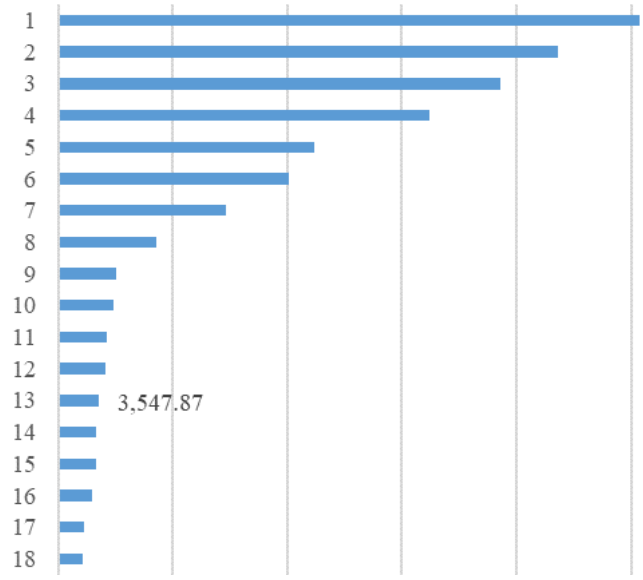


Figure 6: Egypt's GDP per capita in 2020 compared to selected countries in the region

Source: Data extracted by the author from the World Bank dataset for GDP per capita 2020 ranking.

https://data.worldbank.org/indicator/NY.GDP.PCAP.CD

From a foreign trade perspective, Egypt has a large structural trade deficit. Oil and gas remain the country's leading export earners. Suez Canal transit fees provide about US$5 bn a year in foreign currency inflows, and the current account fluctuates, usually registering a modest deficit (Central Bank of Egypt, 2021).

Table 2: Major exports and imports in 2019

Major exports 2019	% of total	Major imports 2019	% of total
Food	11.8	Oil & natural gas	17.3
Cotton & other textiles	9.9	Chemicals	9.5
Chemicals	8.6	Vehicles	6.6

Leading markets 2020	% of total	Leading suppliers 2020	% of total
UAE	10.7	China	14.8
Saudi Arabia	6.4	US	6.7
Turkey	6.2	Saudi Arabia	6.5
US	5.5	Germany	5.8

Source: Data extracted by the author from the Central Bank of Egypt (Central Bank of Egypt, 2021).

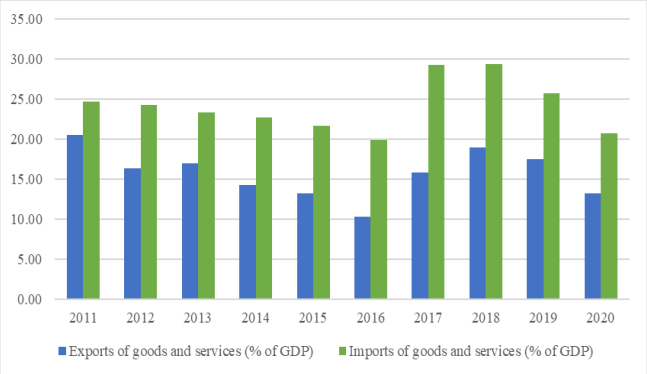


Figure 7: Exports and Imports of goods and services (% of GDP)

Source: Data extracted by the author from the Central Bank of Egypt (Central Bank of Egypt, 2021).

The Foreign Direct Investment (FDI) in Egypt During July/December 2019/2020 registered a net inflow of US$ 5.0 billion, up by 18.5 percent, compared to the same period of the previous fiscal year (Central Bank of Egypt, 2020). The increase in investment inflows was attributed to the hike in FDI flows from Italy by US$ 512.3 million to US$ 2.8 billion (against US$ 2.3 billion). Luxemburg came next with an increase of US$ 329.4 million to US$ 84.3 million (against negative US$ 245.1 million in the period of comparison), then the Netherlands with a rise of US$ 192.6 million to US$ 685.0 million (against US$ 492.4 million). Also, investment flows from the Arab countries during the reporting period rose by US$ 261.4 million, owing to the increase in investment flows from the UAE to register US$ 981.1 million (against US$ 565.3 million) and Qatar (US$ 275.7 million against US$ 176.4 million). Investment flows from the United States increased by US$ 115.2 million to US$ 745.8 million in July/December 2019/2020 (against US$ 630.6 million in the same period of the previous fiscal year) (Central Bank of Egypt, 2021).

Table 3: Geographical Distribution of FDI in Egypt (US$ million)

During July/Dec.	2018/2019	2019/2020*	Change + (-)	Rate
Net Flows of FDI in Egypt (A+B)	4184.7	4958.5	773.8	18.5
A- Total Inflows	8008.2	9160.9	1152.7	14.4
USA	630.6	745.8	115.2	18.3
EU Countries	4713.9	5447.3	733.4	15.6
Arab Countries	1666.8	1928.2	261.4	15.7
Other Countries	996.9	1039.6	42.7	4.3

Source: Data extracted by the author from the Central Bank of Egypt (Central Bank of Egypt, 2021).

Geographic Influence on Competitiveness

Egypt is located in the heart of the Europe, Middle East, and Africa region (EMEA), which gives it strategic access to Europe and Africa, as well as Arab countries. Egypt is considered an African and Arab country at the same time, and it has always had strategic agreements with European countries, especially Germany, France, and Italy, and with the European Union in general (WorldData, 2021).

Egypt's Land area is 997,739 sq km, of which only 5 percent is inhabited and cultivated territory; the current Population is 101.4m (end-2020, CAPMAS estimate) (General Authority for Investment and Free Zones, 2021). The Climate is moderate throughout the year (temperature degrees: Summer 29°-35°, Winter 15°-25° C). The main language is Arabic, and

English and French are common languages (General Authority for Investment and Free Zones, 2021).

The Suez Canal has always been Egypt's biggest geostrategic asset, and its fast-growing ports on the Mediterranean and the Red Sea are becoming increasingly important trade hubs connecting Europe and Africa. In addition, Egypt's extended coastlines are around 2,450 km long across the Mediterranean Sea and the Red Sea with five principal harbors (Alexandria, El Dekheila, Damietta, Port Said, El Sukhna, and Suez) (Maritime Transport Sector, 2021). Around 10 international airports cover most of the major cities in Egypt (WorldData, 2021), in addition to 193,841 km of road network and 9,570 km of railway network. The Egyptian authorities are working on a mega program to upgrade all the country's road and transportation networks (General Authority for Investment and Free Zones, 2021).

Workforce and Human Capital

Egypt's population is rapidly expanding, with a yearly growth rate of approximately 2 percent, currently standing at around 102 million (World Bank, 2020). This places Egypt at the 14th position in the global rank, the highest among Arab countries, and the third in Africa, following Nigeria and Ethiopia. Notably, 46 percent of Egypt's population falls within the 15-44 age group, and the current labor force is estimated to be around 29 million (EIU, 2021).

Table 4: Egypt's labor force 2019

Population	102,399,678 (September 2021)
Population average Growth Rate	2.65 % (2014-2018)
Age Structure:	0-14 years: 33.8% 15-44 years: 46% 45-59 years: 12.5% 60 years and over: 7.7%
Labor Force	29.1 (Q2, 2021)
Universities	41 Universities (23 Public, and 18 Private)
Internet Users	72.76 million (July 2021)
Mobile Users	100.78 million (July 2021)
Fixed Lines Users	10.84 million (July 2021)

Source: ILO, 2021

Table 5: Egypt's labor-related indicators (2021)

Indicator	Total	Men	Women
Labor force participation rate (%)	42.2	67.3	15.6
Employment-population ratio (%)	38.9	64.1	12.2
Share of agriculture (%)	21.1	21.1	21.1
Share of industry (%)	28.5	32	9.3
Share of services (%)	50.1	46.6	69.1
Share of managers, professionals and technicians (%)	29.6	26.1	49.1
Share with advanced education (%)	18	15.3	29.9
Unemployment rate (%)	7.8	4.8	21.6
Average monthly earnings of employees, local currency	360	5607.4	5282.6
Average weekly hours worked per employed person	46.2	47.1	41.2

Source: ILO, 2021

COMPARATIVE ANALYSIS OF EGYPT'S ECONOMIC COMPETITIVENESS

Assessing national competitiveness and benchmarking is crucial for countries like Egypt, especially considering its challenges in achieving sustainable economic development. The competitiveness provides valuable insights into the country's economic strengths and weaknesses, helps identify areas for improvement, and informs policymaking decisions to enhance overall competitiveness (Berger & Bristow, 2009).

Like many developing countries, Egypt has implemented various economic development programs to address its socio-economic challenges. However, despite these efforts, the country struggles to achieve optimal national competitiveness. Therefore, understanding Egypt's position in the global economic landscape is essential for identifying strategic priorities and fostering sustainable economic growth (Berger & Bristow, 2009; Rudra, 2008).

Comparative analysis allows for evaluating Egypt's economic performance relative to other countries and regions, providing an unbiased perspective on its national competitiveness position. By benchmarking against global standards and best practices, Egypt can identify its economy's main strengths and weaknesses

and develop targeted strategies to improve national competitiveness.

This study employs several widely recognized assessment methods and indexes to measure Egypt's national competitiveness:

- **Michael Porter's Single Diamond Model:** This model serves as a reference for developing indexes to measure national competitiveness. It examines factors such as factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry (Porter, 1990). The author will use it in a further study.
- **Global Competitiveness Index (GCI)**: Developed by the World Economic Forum, the GCI measures the microeconomic and macroeconomic foundations of national competitiveness, including institutions, infrastructure, macroeconomic environment, health, education, and innovation capability (WEF, 2014).
- **Global Innovation Index (GII)**: Created by the World Intellectual Property Organization, the GII assesses a country's innovation performance, including indicators related to institutions, human capital and research, infrastructure, market sophistication, business sophistication, and knowledge and technology outputs (WIPO, 2020).
- **Ease of Doing Business Score**: Developed by the World Bank, this score measures the ease of doing business in a particular economy based on factors such as starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency (World Bank, 2020).

Table 6: Comparing the main national competitiveness assessment models

Model	**Diamond model**	**Global Competitiveness Index (GCI)**	**Global Innovation Index (GII)**	**Ease of Doing Business (EDB)**
Author	Michel Porter	World Economic Forum (WEF)	World Intellectual Property Org. WIPO)	World Bank
Year	1990	2005	2007	2016
Component	• Firm strategy, structure & rivalry • Demand conditions • Related supporting industries • Factor conditions • Government	**Stage 1: Factor Driven** • Pillar 1- Institutions • Pillar 2– Infrastructure • Pillar 3- Macroeconomic environment • Pillar 4- Health & primary education **Stage 2: Efficiency Driven** • Pillar 5- Higher education & training • Pillar 6- Goods market efficiency • Pillar 7- Labor market efficiency • Pillar 8- Financial market development • Pillar 9- Technological readiness • Pillar 10- Market size **Stage 3: Innovation Driven** • Pillar 11- Business sophistication • Pillar 12- Innovation	**1 Institutions** 1.1. Political environment 1.2. Regulatory environment 1.3. Business environment **2 Human capital and research** 2.1. Education 2.2. Tertiary education 2.3. Research & development (R&D) **3 Infrastructure** 3.1. ICTs 3.2. General infrastructure 3.3. Ecological sustainability **4 Market sophistication** 4.1. Credit 4.2. Investment **5 Business sophistication**	1. Starting a business procedure 2. Dealing with construction permits procedures 3. Getting electricity procedures 4. Registering property procedures 5. Getting credit 6. Protecting minority investors 7. Paying taxes 8. Trading across borders 9. Enforcing contracts 10. Resolving insolvency 11. Employing workers 12. Contracting with the government

Model	Diamond model	Global Competitiveness Index (GCI)	Global Innovation Index (GII)	Ease of Doing Business (EDB)
			5.1. Knowledge workers 5.2. Innovation linkages 5.2.2. State of cluster development 5.3. Knowledge absorption **6 Knowledge & technology outputs** 6.1. Knowledge creation 6.2. Knowledge impact 6.3. Knowledge diffusion **7 Creative outputs** 7.1. Intangible assets 7.2. Creative goods and services 7.3. Online creativity	
Limitation	• Focus on specific industry or firm • Government factor is not clear • Human factor is not clear • International prospective is not clear	•	• Focus only on innovation	• Focus mainly on institutional regulations
Factors	• Physical factors	• Physical factors • Human factor	• Physical factors • Human factor	• Physical factors • Human factor
Context	• Domestic context	• Domestic context • International context	• Domestic context • International context	• Domestic context • International context
Score Calculation	•	•	•	•
Countries	• Not defined	• 141	• 132	• 190

Source: Author's interpretation

Egypt's Global Competitiveness Index (GCI)

Since 2005, the World Economic Forum has published The Global Competitiveness Report annually, which ranks the most competitive nations worldwide. The report assesses competitiveness using the GCI, a comprehensive tool that measures the microeconomic and macroeconomic foundations of national competitiveness (World Economic Forum, 2014; Schwab, 2009).

As defined by the WEF, competitiveness encompasses the institutions, policies, and factors determining a country's productivity level. This, in turn, influences the country's prosperity, investment returns, and GDP growth rates (World Economic Forum, 2014 and 2015; Schwab, 2009).

The GCI evaluates a country's progress across various factors influencing productivity and competitiveness. It comprises 12 pillars categorized into three development stages:

- Stage 1- Factor Driven: Countries compete based on factor endowments such as skilled labor and natural resources. Key pillars at this stage include institutions, infrastructure, the macroeconomic environment, and health and primary education.

- Stage 2- Efficiency Driven: With increasing competitiveness, countries focus on improving productivity and product quality. This stage emphasizes higher education and training, goods market efficiency, and technological readiness.
- Stage 3- Innovation Driven: In this stage, countries compete through innovation and unique product offerings, and business sophistication and innovation are the critical pillars.

Table 7: Three stages of national competitiveness development (Global Competitiveness Index)

Stage 1 Factor Driven	Stage 2 Efficiency Driven	Stage 3 Innovation Driven
• Pillar 1- Institutions • Pillar 2– Infrastructure • Pillar 3- Macroeconomic environment • Pillar 4- Health & primary education	• Pillar 5- Higher education & training • Pillar 6- Goods market efficiency • Pillar 7- Labor market efficiency • Pillar 8- Financial market development • Pillar 9- Technological readiness • Pillar 10- Market size	• Pillar 11- Business sophistication • Pillar 12- Innovation

Source: World Economic Forum, 2014

Over the period from 2017 to 2019, Egypt has shown mixed performance in its global competitiveness, with some areas witnessing improvement while others experienced fluctuations. The country's overall Global Competitiveness Index (GCI) rank remained relatively stable, indicating some progress in enhancing competitiveness. Notably, Egypt demonstrated consistent improvement in institutional quality and infrastructure, which are fundamental pillars for fostering a conducive business environment and attracting investments. However, challenges persist, particularly in maintaining macroeconomic stability, as indicated by fluctuations in the corresponding pillar's score over the years. Nevertheless, Egypt's positive trajectory in innovation capability suggests the potential for driving productivity and competitiveness in the global economy. Continued efforts to address challenges in macroeconomic stability while further enhancing institutional frameworks and innovation ecosystems can contribute to sustained progress in Egypt's global competitiveness and promote long-term economic growth (World Economic Forum, 2019).

Table 8: Egypt's Global Competitiveness Index (GCI 2017-2019)

	2017	2018	2019
Global Competitiveness Index - Rank	**94**	**94**	**93**
Global Competitiveness Index – Score	**53.17**	**53.59**	**54.54**
1st pillar: Institutions	45.48	48.09	51.33
2nd pillar: Infrastructure	69.62	70.49	73.05
3rd pillar: ICT adoption	38.85	40.55	40.57
4th pillar: Macroeconomic stability	59.23	50.98	44.72
5th pillar: Health	67.99	68.86	65.02
6th pillar: Skills	50.92	52.75	54.20
7th pillar: Product market	48.21	48.20	50.74
8th pillar: Labor market	43.86	46.37	49.50
9th pillar: Financial system	53.39	52.25	56.11
10th pillar: Market size	71.52	72.80	73.57
11th pillar: Business dynamism	53.14	54.07	56.08
12th pillar: Innovation capability	35.86	37.66	39.62

Source: Author's data interpretation from Global Competitiveness Index 4.0
http://reports.weforum.org/global-competitiveness-index-2017-2018/countryeconomy-profiles/#economy=EGY
https://www.weforum.org/reports/global-competitiveness-report-2019

When comparing Egypt's GCI score in 2019 with other Arab countries, Egypt ranks moderately among its peers. It holds a GCI score 54.54, positioning it in the lower range among the listed Arab nations. Notably, Egypt performs relatively well in pillars such as infrastructure and market size, indicating strengths in physical and market-related aspects. However, challenges persist in areas like macroeconomic stability and innovation capability, where Egypt falls behind compared to other Arab countries. Despite efforts to strengthen institutions and skills development, Egypt's performance in these areas remains moderate (World Economic Forum, 2019).

Moreover, Egypt's GCI scores exhibit a similar pattern when compared to the EMEA region and lower-middle-income countries. While Egypt's infrastructure pillar score surpasses the EMEA region's average, it lags in several other pillars, including macroeconomic stability and innovation capability. This suggests a need for further reforms and investments to address structural challenges and enhance Egypt's competitiveness on both regional and global scales. Efforts to improve institutional quality, foster innovation, and enhance macroeconomic stability can play a crucial role in bolstering Egypt's overall competitiveness and driving sustainable economic growth in the future (World Economic Forum, 2019).

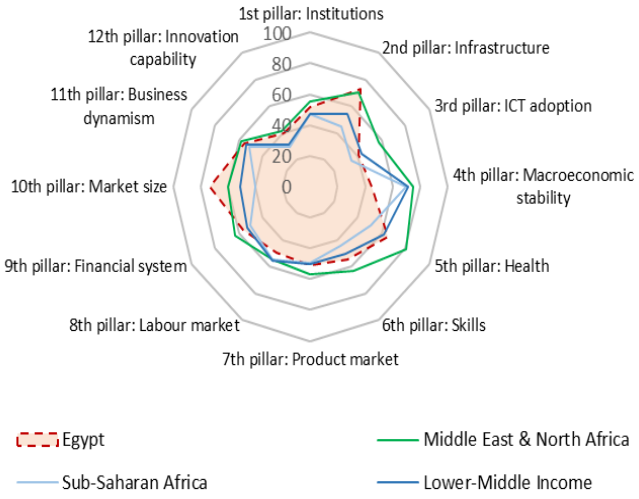


Figure 8: Egypt's GCI 2019 to the Middle East & North Africa, Sub-Saharan Africa, and Lower- Middle-Income average

Source: Data extracted by the author from the GCI data set (https://www.weforum.org/reports/global-competitiveness-report-2019)

Table 9: Egypt's GCI score in 2019 compared to Arab Countries

Series name	GCI	1st pillar: Institutions	2nd pillar: Infrastructure	3rd pillar: ICT adoption	4th pillar: Macro-economic stability	5th pillar: Health	6th pillar: Skills	7th pillar: Product market	8th pillar: Labor market	9th pillar: Financial system	10th pillar: Market size	11th pillar: Business dynamism	12th pillar: Innovation capability
UAE	75.01	73.26	88.49	91.87	100.00	72.18	70.61	71.74	66.16	73.84	70.34	69.27	52.34
Qatar	72.87	63.22	81.64	83.78	98.64	88.60	70.54	66.85	63.38	81.34	60.45	65.96	50.03
Saudi Arabia	70.03	63.19	78.06	69.30	100.00	82.25	75.35	64.92	56.62	70.68	76.27	53.12	50.55
Bahrain	65.38	62.90	78.39	67.19	68.30	86.90	68.71	65.11	66.43	71.33	46.26	64.31	38.72
Kuwait	65.10	55.58	68.37	69.57	100.00	96.08	61.33	57.86	54.35	71.61	60.11	56.09	30.30
Oman	63.61	62.35	80.50	58.11	67.41	80.68	71.54	63.12	55.75	63.90	55.86	62.82	41.24
Jordan	60.94	59.82	67.45	51.04	69.85	86.65	67.15	55.83	57.71	71.62	48.81	56.56	38.78
Morocco	60.01	60.02	72.63	46.20	90.00	72.33	48.62	55.99	51.48	67.46	60.46	59.80	35.12
Tunisia	56.41	52.97	62.74	50.92	65.65	85.34	59.60	52.44	46.43	55.72	53.50	58.97	32.64
Lebanon	56.29	44.39	61.27	46.66	66.51	82.05	64.23	51.21	54.40	64.71	48.56	53.00	38.48
Algeria	56.25	45.53	63.79	52.72	71.20	82.76	59.07	45.79	47.10	50.05	66.47	56.20	34.38
Egypt	**54.54**	**51.33**	**73.05**	**40.57**	**44.72**	**65.02**	**54.20**	**50.74**	**49.50**	**56.11**	**73.57**	**56.08**	**39.62**

Source: Global Competitiveness Index, 2019

Table 10: Egypt's GCI average score 2019 compared to EMEA Region and Lower-Middle Income

GCI 2019	GCI 4.0 2019	1st pillar: Institutions	2nd pillar: Infrastructure	3rd pillar: ICT adoption	4th pillar: Macro-economic stability	5th pillar: Health	6th pillar: Skills	7th pillar: Product market	8th pillar: Labor market	9th pillar: Financial system	10th pillar: Market size	11th pillar: Business dynamism	12th pillar: Innovation capability
Middle East & North Africa	61.44	55.45	70.54	57.60	75.26	80.77	62.94	56.74	54.84	63.70	59.94	58.23	41.31
Egypt	**54.54**	**51.33**	**73.05**	**40.57**	**44.72**	**65.02**	**54.20**	**50.74**	**49.50**	**56.11**	**73.57**	**56.08**	**39.62**
Sub-Saharan Africa	47.25	46.92	45.01	34.26	69.43	50.83	44.28	49.28	54.59	50.80	40.36	51.81	29.44
Lower-Middle Income	51.95	47.25	54.51	42.80	70.95	62.20	50.63	50.35	55.01	53.31	51.20	53.76	31.42

Source: Global Competitiveness Index, 2019

Egypt's Global Innovation Index 2020

lower range among the listed Arab nations. Notably, Egypt performs relatively well in pillars such as infrastructure and market size, indicating strengths in physical and market-related aspects. However, challenges persist in areas like macroeconomic stability and innovation capability, where Egypt falls behind compared to other Arab countries. Despite efforts to strengthen institutions and skills development, Egypt's performance in these areas remains moderate (World Economic Forum, 2019).

Innovation Input Sub-Index:

- Institutions: Political, regulatory, and business environment
- Human Capital & Research: Education, research, and development
- Infrastructure: Information and communication technologies (ICTs), ecological sustainability
- Market Sophistication: Credit, investment, trade, competition, and market scale
- Business Sophistication: Public/private/academic partnerships, competitive pressure, efficiency gains, and economies with high-tech content

Innovation Input Sub-Index:

- Knowledge and Technology Outputs: Creation, impact, and diffusion of knowledge
- Creative Outputs: Intangible assets, creative goods, and services

In 2020, Egypt performed better in innovation outputs than inputs, ranking 104th in innovation inputs and 82nd in innovation outputs (WIPO, 2020). Although Egypt improved its rank in innovation inputs compared to previous years, its position in innovation outputs declined. Egypt ranks 14th among the 29 lower-middle-income economies (WIPO, 2020; WIPO, 2021). Conversely, Egypt excels in knowledge and technology outputs but faces institutional challenges. While performing above the lower-middle-income group average in infrastructure and knowledge and technology outputs, Egypt lags below the regional average across all GII pillars (WIPO, 2020; WIPO, 2021).

Table 11: Egypt's Global Innovation Index (GII 2016-2021)

Indicator	Type	2016	2017	2018	2019	2020	2021
Global Innovation Index	Rank	**107**	**105**	**95**	**92**	**96**	**94**
Global Innovation Index	Score (0-100)	**26**	**26**	**27.2**	**27.5**	**24.2**	**25.09**
Institutions	Score (0-100)	39	40.4	44.3	47.9	48.6	49.3
Human capital & research	Score (0-100)	27.3	26.9	22.9	19.7	21.5	21.8
Infrastructure	Score (0-100)	38.3	38.4	37.9	36.8	31.5	33.5
Market sophistication	Score (0-100)	34.2	36.7	38.8	41	39.3	40.9
Business sophistication	Score (0-100)	20	21	19.5	21.2	18.7	18
Knowledge &technology outputs	Score (0-100)	18.5	17	21.1	22.1	19.7	19.4
Creative outputs	Score (0-100)	21.8	21.6	22.1	21.1	13.4	15.5

Source: Data extracted by the author from the World Bank TcData360 https://tcdata360.worldbank.org /indicators/3aa2eb70?indicator=40712&viz=line_chart&years=2013,2020

Egypt's performance in the Global Innovation Index (GII) for 2021 indicates a mixed picture compared to other Arab countries. With a GII score of 25.09, Egypt falls behind several peers, positioning it in the region's lower range of innovation capability. Specifically, Egypt lags in various pillars, such as institutions, human capital and research, and creative outputs, suggesting challenges in fostering an environment conducive to innovation and knowledge creation (WIPO, 2020; WIPO, 2021).

Institutional quality, a critical factor for innovation, ranks relatively low for Egypt compared to countries like the United Arab Emirates and Bahrain. Similarly, Egypt's performance in human capital and research is moderate, indicating a pressing need for further investment in education, research, and development. This investment is crucial to enhance Egypt's innovation capacity (WIPO, 2020; WIPO, 2021).

While Egypt shows some strength in infrastructure and market sophistication, its performance in business sophistication, knowledge and technology outputs, and creative outputs is below par compared to regional peers. These findings underscore the urgent need to foster a robust ecosystem that supports entrepreneurship, research and development, and creative endeavors. This is crucial to enhance Egypt's innovation potential and overall competitiveness in the global arena. Efforts to improve institutional quality, invest in human capital, and promote a culture of innovation are essential for Egypt to harness its full innovation capacity and drive sustainable economic growth in the future (WIPO, 2020; WIPO, 2021).

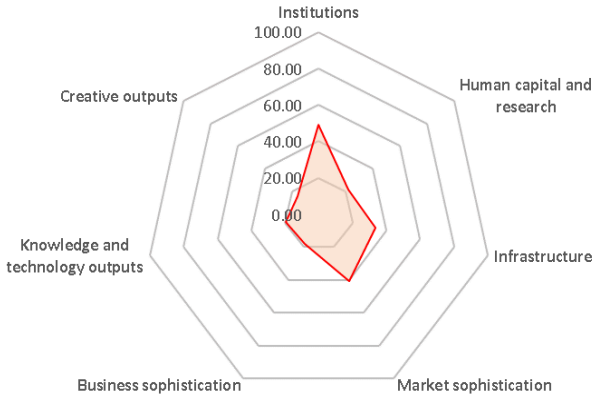


Figure 9: Egypt's Global Innovation Index 2020
Source: Data extracted by the author from the World Intellectual Property Organization (WIPO), publication (https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020/eg.pdf)

Table 12: Egypt's GII index scores compared to Arab countries in 2021

Country	GII 2021	Institutions	Human capital & research	Infrastructure	Market sophistication	Business sophistication	Knowledge & technology outputs	Creative outputs
United Arab Emirates	43.03	78.36	49.94	58.11	56.72	47.20	22.22	33.76
Saudi Arabia	31.84	53.26	45.72	45.12	51.93	21.14	19.64	20.87
Qatar	31.49	66.00	29.83	52.31	43.19	19.95	16.80	24.65
Tunisia	30.68	61.38	42.66	34.23	40.69	16.53	23.98	20.55
Kuwait	29.90	57.72	31.36	49.56	41.44	18.75	22.07	17.99
Oman	29.41	62.32	37.87	45.05	43.16	20.18	11.73	22.47
Morocco	29.26	61.57	27.51	36.31	41.86	18.05	20.08	22.83
Bahrain	28.82	69.37	26.30	50.49	44.33	21.11	15.80	14.82
Jordan	28.32	64.36	26.25	30.13	49.74	21.94	18.02	18.29
Lebanon	25.12	50.14	24.95	30.38	42.01	25.44	14.13	17.18
Egypt	25.09	49.33	21.76	33.54	40.90	18.05	19.38	15.55
Algeria	19.87	52.54	29.83	31.84	23.69	14.70	8.12	10.31

Source: Data extracted by the author: https://www.globalinnovationindex.org/analysis-indicator/

Egypt's Ease of Doing Business

The World Bank's Doing Business index evaluates the regulatory environment for small and medium-sized enterprises (SMEs) in 190 economies worldwide. The index focuses on various aspects of business regulation that can impact the ease of doing business for domestic firms, particularly those in each country's largest business city (World Bank, 2020).

The Doing Business report covers 12 key areas of business regulation, each of which plays a crucial role in shaping the business environment:

- Starting a Business: Measures the procedures, time, and cost required for entrepreneurs to establish a new business entity.
- Dealing with Construction Permits: Evaluates the procedures and requirements for obtaining construction permits, which are essential for initiating construction projects.
- Getting Electricity: Assesses the procedures and reliability of electricity supply, including the time and cost involved in obtaining an electricity connection.
- Registering Property: Examines the procedures and requirements for registering property ownership, which are essential for establishing legal ownership rights.
- Getting Credit: Evaluates the legal framework and practices for accessing credit, including the depth and breadth of credit information available to lenders.
- Protecting Minority Investors: Assesses the legal protections and transparency measures in place to safeguard the interests of minority shareholders in companies.
- Paying Taxes: Examines the tax regime and administrative procedures for calculating, filing, and paying taxes, including the complexity and cost of tax compliance.
- Trading Across Borders: Evaluates the efficiency and cost of importing and exporting goods, including customs procedures, documentation requirements, and border compliance.
- Enforcing Contracts: Assesses the efficiency and effectiveness of the judicial system in resolving commercial disputes and enforcing contractual obligations.
- Resolving Insolvency: Examines the legal framework and procedures for resolving insolvency and restructuring financially distressed businesses.

The Doing Business index can provide insights into the regulatory environment for businesses, highlighting areas where reforms are needed to improve the ease of doing business and promote economic growth and entrepreneurship. Countries can use the findings of the Doing Business report to identify areas for policy reform and benchmark their performance against global standards (World Bank, 2020).

Over the period from 2016 to 2020, Egypt has shown a mixed performance in its Ease of Doing Business rankings and scores. While the country has made significant progress in certain areas, such as starting a business, accessing credit, and protecting minority investors, with noticeable improvements in scores over the years, challenges persist in other aspects, like enforcing contracts and facilitating international trade. Notably, improvements in getting electricity and paying taxes reflect ongoing efforts to streamline administrative processes and enhance the business environment. However, stagnant scores in areas like trading across borders suggest a need for further reforms to boost efficiency and reduce trade barriers. Overall, Egypt's journey in improving its Ease of Doing Business highlights progress and areas requiring continued attention to foster a more conducive environment for business growth and investment (World Bank, 2020).

Table 13: Egypt's Ease of Doing Business, 2016 -2020

Egypt Ease of Business Rank					114
DB Score	**54.89**	**55.56**	**55.82**	**58.5**	**60.1**
DB Year	**2016**	**2017**	**2018**	**2019**	**2020**
Starting a business	81.04	81.06	84.11	83.8	87.8
Dealing with construction permits	71.23	71.37	71.77	70.8	71.2
Getting electricity	71.48	71.24	71.41	71.5	77.9

Registering property	54.3	54.96	55	55	55
Getting credit	50	50	65	65	65
Protecting minority investors	51.67	55	58.33	62	64
Paying taxes	51.37	50.67	52.73	52.6	55.1
Trading across borders	42.23	42.23	42.23	42.2	42.2
Enforcing contracts	42.75	42.75	42.75	40	40
Resolving insolvency	39.51	38.89	42.27	42.3	42.2

Source: Data extracted by the author from the Doing Business Report (World Bank, 2020)

In 2020, Egypt's Ease of Doing Business scores compared to other Arab countries varied across different indicators. "Starting a business" in Egypt was relatively favorable compared to other nations, with a score of 87.8, placing it in the upper half of the rankings. However, challenges were evident in areas such as registering property, where Egypt scored 55.0, indicating room for improvement compared to countries like the United Arab Emirates, Bahrain, and Morocco, which scored significantly higher (World Bank, 2020).

Egypt's performance was moderate regarding getting credit and protecting minority investors, with scores of 65.0 and 64.0, respectively. While these scores were higher than those of some countries like Algeria and Lebanon, they lagged behind the top performers in the region. Egypt also faced challenges in enforcing contracts and resolving insolvency, with scores of 40.0 and 42.2, respectively, indicating areas needing attention to improve the legal and regulatory framework for business operations (World Bank, 2020).

Overall, Egypt's Ease of Doing Business score in 2020 was 60.1, positioning it in the middle ranks of the Arab countries. While Egypt demonstrated strengths in starting a business and aspects related to credit and investor protection, there are clear opportunities for enhancement in areas like property registration, contract enforcement, and insolvency resolution to further improve the business environment and attract investment (World Bank, 2020).

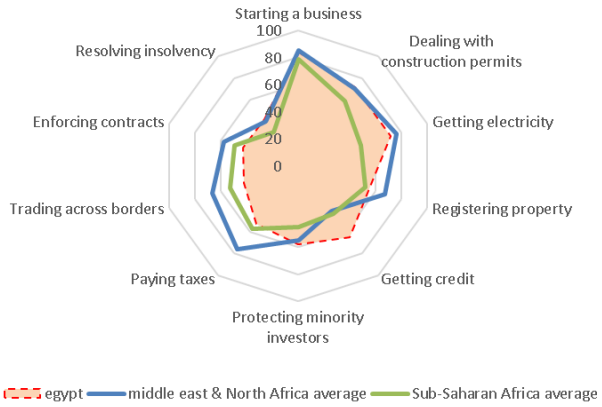


Figure 10: Egypt's ease of doing business 2020 to the Middle East & North Africa, and Sub-Saharan Africa average

Source: Data extracted by the author from the Doing Business Report (World Bank, 2020)

Table 14: Egypt's Ease of Doing Business scores compared to Arab countries in 2020

Economy	Starting a business	Ease of dealing with construction permits	Ease of getting electricity	Ease of registering property	Ease of getting credit	Strength of minority investors protection	Ease of paying taxes	Ease of trading across borders	Ease of enforcing contracts	Ease of resolving insolvency	Overall ease of doing business score
United Arab Emirates	94.8	89.8	100.0	90.1	70.0	80.0	85.3	74.1	75.9	49.3	**80.9**
Bahrain	89.6	83.1	79.7	86.2	55.0	66.0	100.0	78.7	63.8	58.2	**76.0**
Morocco	93.0	83.2	87.3	65.8	45.0	70.0	87.2	85.6	63.7	52.9	**73.4**
Saudi Arabia	93.1	78.3	91.8	84.5	60.0	86.0	80.5	76.0	65.3	0.0	**71.6**
Oman	93.5	75.2	87.1	73.0	35.0	56.0	90.2	84.1	61.9	44.0	**70.0**
Jordan	84.5	60.3	80.5	66.4	95.0	50.0	78.7	79.0	55.6	39.7	**69.0**
Qatar	86.1	84.2	83.6	96.2	45.0	28.0	99.4	71.5	54.6	38.0	**68.7**
Tunisia	94.6	77.4	82.3	63.7	50.0	62.0	69.4	74.6	58.4	54.2	**68.7**
Kuwait	88.4	71.9	81.9	75.1	45.0	66.0	92.5	52.6	61.4	39.2	**67.4**
Egypt	**87.8**	**71.2**	**77.9**	**55.0**	**65.0**	**64.0**	**55.1**	**42.2**	**40.0**	**42.2**	**60.1**
Lebanon	78.2	53.7	62.7	59.4	40.0	44.0	67.5	57.9	50.8	29.1	**54.3**
Algeria	78.0	65.3	72.1	44.3	10.0	20.0	53.9	38.4	54.8	49.2	**48.6**

International Labor Organization. (2021). *Country Profile Egypt.* https://ilostat.ilo.org/data/country-profiles/

International Monetary Fund. (2021, July 14). *Egypt: Overcoming the COVID shock and maintaining growth*. https://www.imf.org/en/News/Articles/2021/07/14/na070621-egypt-overcoming-the-covid-shock-and-maintaining-growth

International Monetary Fund. (2021, April 14). *The future of emerging markets*. International Monetry Fund: https://www.imf.org/external/pubs/ft/fandd/2021/06/the-future-of-emerging-markets-duttagupta-and-pazarbasioglu.html

Martime Transport Sector. (2021, October 9). *The Egyptian Port's Capacity*. Martime Transport Sector (MTS): https://www. mts.gov.eg/en/content/275/1-83-The-Egyptian-Ports-Capacity

Porter, M. (1990). The competitive advantage of nations. *Harvard Business Review, 68*(2), 73-93.

Rudra, N. (2008). *Globalization and the race to the bottom in developing countries: Who really gets hurt?* Cambridge University Press.

Schwab, K. (2009). *The global competitiveness report 2009-2010.* World Economic Forum. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2009-10.pdf

Shokr, A. (2017). Sisi's Egypt: Building political legitimacy amidst economic crises. *Middle East Briefs, 106*.

Vadra, R. (2018). After BRICS, CIVETS as emerging markets. *Journal of International Economics, 9*(2), 2-12.

WIPO. (2020, October 1). *Global Innovation Index 2020 - Egypt*. World Intellectual Property Organization. https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020/eg.pdf

WIPO. (2021, September 23). *Global Innovation Index 2021*. World Intellectual Property Organization. https://www.globalinnovationindex.org/about-gii#history

World Bank. (2020, October 1). *Doing Businesses 2020*. Business Enabling Environment (BEE): https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020

World Bank. (2020). *Egypt Economic Monitor, November 2020: From Crisis to Economic Transformation-Unlocking Egypt's Productivity and Job-Creation Potential.*

World Economic Forum. (2014). *The Global Competitiveness Report 2014-2015.* Insight Report.

World Economic Forum. (2015). *The Global Competitiveness Report 2014-2015: Full Data Edition.*

World Economic Forum. (2019). *Global Competitiveness Index.* World Economic Forum. https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

WorldData. (2021, October 9). *The 10 biggest airports in Egypt*.https://www.worlddata.info/ africa/egypt/airports.php

Disclaimer

This research paper includes contributions from artificial intelligence tools, specifically ChatGPT, for proofreading and editing. While we use AI tools to enhance the language quality of the paper, all underlying ideas, data analysis, and conclusions presented herein are the result of the author's independent research efforts. We disclose the use of AI transparently and provide appropriate acknowledgments. The author adheres to ethical principles and academic integrity standards when using AI in research.