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Startup innovation ecosystems in the Middle East and North Africa: Opportunities, challenges, and economic implications, and lessons from the UAE

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***Abstract*---Purpose:** This paper aims to examine the innovative entrepreneurial ecosystem of startup in the Middle East and North Africa (MENA) region and its contribution to fostering economic development. The MENA region is considered one of the world's most promising investment destinations due to its abundant natural resources and substantial youth demographic, which together provide significant opportunities for innovation and entrepreneurship. The study adopts a descriptive-analytical approach by collecting data from a variety of secondary sources and conducting a systematic analysis. The findings reveal that the startup sector plays a pivotal role in promoting the economic development of emerging economies. However, maximizing its contribution requires the implementation of effective economic policies that prioritize technological development, entrepreneurship, and investment promotion, thereby creating and strengthening a supportive national innovation ecosystem in each country.

***Keywords*---**Startup, Innovation Ecosystem, Innovation, Middle East and North Africa (MENA), Economic Development.

1. Introduction

Over the past decade, startups have emerged as key drivers of innovation, entrepreneurship, and sustainable economic development. Their ability to introduce innovative products, services, and business models has positioned them as strategic contributors to economic diversification, employment generation, and technological advancement. Consequently, governments

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worldwide have increasingly focused on creating supportive entrepreneurial ecosystems that foster startup creation, growth, and competitiveness.
The Middle East and North Africa (MENA) region has experienced remarkable progress in developing entrepreneurial ecosystems. This transformation has been driven by government reforms, digital transformation strategies, increased venture capital investments, and the growing participation of universities, business incubators, and accelerators. Furthermore, the COVID-19 pandemic highlighted the importance of innovation-based enterprises in enhancing economic resilience and accelerating the transition toward knowledge-based economies.

Despite these developments, significant disparities remain among MENA countries regarding the maturity and effectiveness of their entrepreneurial ecosystems. While countries such as the United Arab Emirates and Saudi Arabia have established globally competitive startup environments, several other countries continue to face institutional, financial, and regulatory challenges that hinder entrepreneurial growth.

Against this background, this study investigates the contribution of startup ecosystems to innovation and economic development in the MENA region by examining the key factors that shape entrepreneurial ecosystems and evaluating their role in supporting sustainable economic transformation.

1.1 Research problem

Based on the foregoing discussion, the following research problem is: **To what extent do startups in the Middle East and North Africa (MENA) contribute to the development of an innovation ecosystem and, consequently, to the economic advancement of the region?**

1.2 Research Hypothesis

To address the research problem, the following hypothesis is proposed:

- **Startups play a significant role in the innovation ecosystem of the MENA region, as they constitute innovative ventures that contribute to regional economic growth and enhance its overall performance.**

1.3 Research Structure

To address the research problem and test the proposed hypothesis, this paper is organized into three main sections:

- **Section One:** General Concepts of Startups;
- **Section Two:** The Innovation Ecosystem of Startups;
- **Section Three:** The Contribution of the Startup Sector to Supporting the Innovation Ecosystem in the Middle East and North Africa (MENA).

1.4 Research Objectives

This study aims to:

- Provide an overview of startups in the Middle East and North Africa (MENA) region and highlight their key characteristics;
- Identify the main features of the innovation ecosystem that distinguish the MENA region;

- Examine selected innovation ecosystems within the region and analyze their relevant data.

1.5 Research Methodology

This study adopts a descriptive-analytical approach. The descriptive method is employed to establish the theoretical framework of the study based on both primary and secondary sources, while the analytical method is used to examine and interpret the data relevant to the research topic.

Literature review

1. General Concepts of Startups

Startups are among the most significant outcomes of modern innovation ecosystems. They have attracted considerable attention in recent years because of their substantial contribution to national economic development.

a) **Definition of a Startup**

The definition of a startup varies according to the criteria adopted and the characteristics of the ecosystem in which it operates. From a general linguistic perspective, the **Cambridge Dictionary** defines the term *startup* as a combination of the words *start*, referring to the beginning of an activity, and *up*, denoting rapid growth *(CAMBRIDGE DICTIONARY, 2022)*. Meanwhile, **Larousse** defines a startup as "a young innovative company operating in the field of modern technologies". *(LAROUSSE, 2022)* .Several scholars have also proposed definitions of startups. **Eric Ries** defines a startup as "a human institution designed to create a new product or service under conditions of extreme uncertainty" *(RIES, 2011)* . Other researchers describe startups as newly established firms that respond to the dynamic needs of contemporary markets and are characterized by four essential features: **age, innovation, rapid growth, and risk under conditions of uncertainty** *(Zoltan J. Acs & David B. Audretsch, February 1994)*

Based on these definitions, startups can be defined as innovative business ventures established to provide novel products or services by addressing customer needs under conditions of high uncertainty and significant risk, while possessing strong potential for rapid growth and market expansion if successful.

b) **Characteristics of Startups**

Startups differ from conventional small and medium-sized enterprises (SMEs) in that they are technology-driven, exhibit relatively rapid growth, and operate under high levels of risk. Their main characteristics can be summarized as follows *(Nurcahyo, Akbar, & Sihono Gabriel, January 2018):*

- **Organizational Structure:** Startups are newly established small firms characterized by a simple organizational structure and a high degree of centralized decision-making. Consequently, they tend to minimize administrative hierarchies and adopt an informal management style.
- **Ownership:** In most cases, the founder is also the owner and manager, assuming primary responsibility for strategic decision-making and the direct supervision of business operations.
- **Strategy and Innovation:** Technological innovation represents the defining characteristic of startups, enabling them to create added value, differentiate themselves from competitors, and achieve leadership within their respective markets. Moreover, startups generally pursue a

specialization strategy to secure a larger market share while accepting a relatively high degree of business risk.

- **Financing:** During the early stages of development, startup founders typically rely on financial support from family members and friends. As the business expands, they may seek additional funding from external sources, such as business angels and other early-stage investors.

It should be noted that the characteristics of startups depend largely on the criteria used to define them. These characteristics may vary across industries and business environments; nevertheless, most startups share the common features outlined above.

c) Startup Life Cycle

Startups strive to achieve entrepreneurial success and rapid growth within their fields of specialization. However, before reaching the growth stage, they often experience periods of stagnation and operational challenges. The majority of scholars agree that startups generally evolve through five main stages (mahboub & senousi, 2020)

- **Stage One – Idea Development:** This stage begins with an innovative idea proposed by an individual or a group of entrepreneurs. The concept is carefully evaluated in terms of market demand and customer needs to determine its feasibility and commercial potential.
- **Stage Two – Product Launch:** At this stage, the first prototype or initial version of the product or service is introduced to the market. Startups often encounter significant financing constraints due to their novelty and limited track record. Consequently, they usually depend on funding from family members, friends, or angel investors willing to assume high levels of risk in anticipation of future returns. Marketing efforts are also intensified to establish the product's market position.
- **Stage Three – Market Expansion:** During this phase, the startup reaches its initial growth peak. Nevertheless, the emergence of new competitors creates additional market pressure, making it increasingly difficult to maintain competitive advantages and sustain growth.
- **Stage Four – Consolidation or Decline:** At this point, the startup follows one of two possible trajectories. It may strengthen its market position by overcoming previous challenges through strategic improvements and accumulated managerial experience, thereby achieving significant growth in performance and profitability. Alternatively, failure to adapt may expose the firm to the risk of market exit.
- **Stage Five – Rapid Growth:** In the final stage, the startup experiences sustained and accelerated growth. Its products or services gain a substantial market share, resulting in considerable revenue generation and long-term business expansion.

2. The Innovation Ecosystem of Startups

In its broadest sense, an **ecosystem** refers to a set of interconnected elements that influence one another within a given environment. In the business context, the term **business ecosystem** denotes the environment in which various stakeholders involved in entrepreneurship interact, with startups playing a central role. Consequently, governments place considerable emphasis on

establishing favorable entrepreneurial environments by adopting appropriate policies and support mechanisms.

a) Definition of the Innovation Ecosystem

The **business innovation ecosystem** is defined as a complex and dynamic structure composed of multiple actors and continuously evolving phenomena *(KOMOROWSKI, 2019).* It represents an organizational network that encompasses all stakeholders interacting with firms throughout the innovation process.

With the acceleration of globalization and the widespread adoption of digital technologies, the concept of the **innovation ecosystem** has gained increasing importance. It can be defined as a set of interrelated factors that facilitate the generation of new ideas, transform them into innovative products and services, and ultimately enable their commercialization on a large scale. The success of such an ecosystem depends on the availability of several enabling conditions, including an entrepreneurial culture, a willingness to embrace risk and change, and the presence of knowledge-based institutions such as universities, research laboratories, and business incubators *(Schwab & Zahidi, 2020).*

National economic policies significantly influence startup ecosystems, as these ecosystems are affected to varying degrees by numerous environmental factors. According to (David, 2022), the quality of a startup ecosystem can be assessed through three main dimensions:

- **Quantity Score:** A strong entrepreneurial ecosystem is not characterized solely by the number of startups it contains but also by the availability of supporting organizations. The principal indicators include:
  - Number of startups;
  - Number of coworking spaces;
  - Number of startup accelerators;
  - Number of entrepreneurship-related networking events and meetups.
- **Quality Score:** The quality of a startup ecosystem is generally evaluated based on the following indicators:
  - The ecosystem's ability to attract a large number of participants and stakeholders;
  - Availability of research and development centers and strategic regional branches;
  - Presence of multinational companies and global innovation hubs, such as **WeWork Spaces**;
  - Total private-sector investment in the startup ecosystem;
  - Average number of employees per startup;
  - Number of startup-related conferences, exhibitions, and events;
  - Number of startups supported by business accelerators.
- **Business Environment Score:** The quality of the business environment varies across countries and may even differ between cities within the same country. Its principal indicators include:
  - Investment diversity index;
  - Internet speed and digital infrastructure;
  - Research and development (R&D) expenditure;
  - Availability of advanced technological services;
  - Number of patents per capita;
  - English language proficiency;
  - Number of leading universities within the region.

The existence of startups within a supportive innovation ecosystem constitutes one of the most critical determinants of their success. An environment that encourages innovation and provides adequate support mechanisms enables startups to achieve their objectives more efficiently and accelerate their growth.

b) Definition of the Startup Ecosystem

The startup ecosystem varies according to the geographical and institutional context in which it operates. Rather than being static, it resembles a biological ecosystem that continuously evolves over time. What distinguishes successful startups from unsuccessful ones is the existence of a supportive business environment that integrates all the essential components required for entrepreneurial growth. While some startup ecosystems have evolved over more than fifty years and others are relatively recent, making it difficult to establish a universally accepted definition, most of them share the following key components (Mokhnache & Khacef, 2021):

- **Entrepreneurs:** Entrepreneurs constitute the cornerstone of the startup ecosystem. They possess a combination of personal attributes and managerial competencies, including creativity, leadership, resilience, and the willingness to undertake risks.
- **Technology:** Startups are required to keep pace with technological advancements by adopting modern technologies and digital tools that facilitate business operations, improve efficiency, and enhance competitiveness.
- **Markets:** Markets represent the environment in which startups commercialize their products and services to satisfy customer needs. Depending on their growth strategy, startups may operate in local, regional, or international markets.
- **Finance:** Access to financial resources is essential for the survival and growth of startups. During their early stages, startups generally depend on private funding sources; however, continuous expansion requires larger investments and diversified financing mechanisms.
- **Human Capital:** Human capital has become one of the most strategic assets of modern economies. Skilled and knowledgeable individuals constitute the primary source of innovation, creativity, and entrepreneurial initiative within startups.
- **Support Factors:** These include business incubators, startup accelerators, coworking spaces, government institutions, and legal and regulatory frameworks that provide guidance, mentoring, financing opportunities, and technical assistance throughout the different stages of startup development.
- **Universities:** Universities play a pivotal role in promoting entrepreneurship among students by fostering innovation, providing entrepreneurial education, supporting research commercialization, and offering incubation services that facilitate the creation of innovative ventures.
- **Demography:** Demographic characteristics constitute an integral part of the entrepreneurial environment. Population size, age structure, educational attainment, and cultural values influence consumer behavior and shape entrepreneurial opportunities within a given region.

c) The Importance of an Innovation-Based Ecosystem for Startup Success

Developed economies tend to allocate substantial investments to innovation, research, and development, which largely explains the maturity and competitiveness of their entrepreneurial ecosystems. They also place significant emphasis on the digital transformation of economic sectors and the adoption of advanced technologies across industries.

According to **Michael Porter**, national economies evolve through three successive stages of development, each reflecting a different source of competitive advantage ([ITU], 2018)

- **Factor-Driven Economy:** Economic growth is primarily supported by natural resources and labor-intensive production.
- **Efficiency-Driven Economy:** Growth is based on increased productivity, industrialization, and manufacturing efficiency. This stage is commonly observed in emerging economies transitioning toward higher levels of development.
- **Innovation-Driven Economy:** Economic competitiveness is primarily generated through knowledge creation, technological innovation, research and development, and information and communication technologies.

These stages illustrate the developmental path followed by national economies in their pursuit of sustainable economic growth. Within this framework, technological innovation represents one of the principal drivers of long-term economic development and competitiveness.

3. The Contribution of the Startup Sector to Supporting the Innovation Ecosystem in the Middle East and North Africa (MENA)

a) Overview of the Middle East and North Africa (MENA) Region

The Middle East and North Africa (MENA) region is characterized by considerable economic diversity. It is endowed with abundant natural resources, favorable climatic conditions, and a young and dynamic workforce, making it an attractive destination for both domestic and foreign investment. The region comprises a group of countries linked by common geographical, historical, and cultural characteristics, including Jordan, the United Arab Emirates, Iran, Bahrain, Tunisia, Algeria, Djibouti, Syria, the West Bank, Iraq, Oman, Qatar, Kuwait, Lebanon, Libya, Malta, Egypt, Morocco, the Kingdom of Saudi Arabia, and Yemen. With a population exceeding **420 million inhabitants**, the majority of whom are young university graduates, the MENA region continues to implement economic policies and government initiatives aimed at encouraging investment, entrepreneurship, and technological advancement.

The MENA region possesses substantial potential to overcome the limitations of resource-dependent economies and transition toward more diversified and knowledge-based economic models. According to the **World Bank's MENA Economic Update**, the region's economy was projected to grow by **5.5% in 2022**. Nevertheless, growth rates vary considerably across countries due to several factors, most notably the lingering effects of the COVID-19 pandemic, rising oil prices, and increases in global food prices resulting from the Russia–Ukraine conflict (WorldBank, 2024).

b) The Contribution of the Internet to Enhancing the Innovation Ecosystem in the MENA Region

Historically, economic growth in the MENA region relied heavily on the exploitation and export of natural resources. However, with the transition toward the digital economy, increasing emphasis has been placed on investments in information technology and digital innovation. Likewise, human capital has become recognized as the principal driver of creativity, innovation, and entrepreneurial development.

The Internet has evolved into one of the most influential tools for education, communication, knowledge dissemination, and technology transfer, thereby making a significant contribution to the development of innovation ecosystems throughout the region.

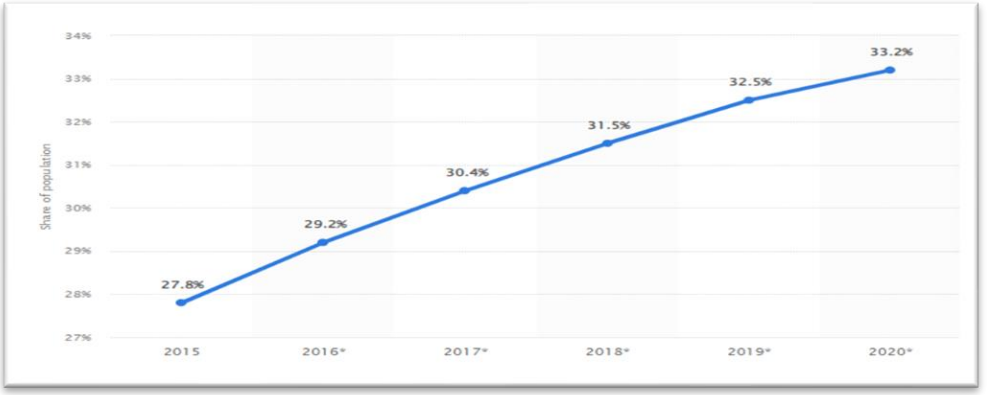

Figure 1. Internet Penetration in the MENA Region

Source: Prepared by the researcher based on Statista data (statista, 2022)

The data presented in Figure 1 reveal several important observations:

- Internet penetration in the Middle East and North Africa has increased steadily over recent years. The region has experienced one of the world's fastest digital transformations, with internet penetration reaching **33.2% in 2020**.
- The average daily Internet usage rate in the MENA region reached **88%**, reflecting the growing dependence on digital technologies.
- The widespread adoption of the Internet has accelerated technological development across the region. Compared with many other parts of the world, the MENA region records one of the highest annual growth rates in Internet and smartphone usage—approximately **40% per year**—with more than **100 million Internet users**
- Saudi Arabia ranked **seventh worldwide** in social media usage in 2017, with an average of seven social media accounts per individual *(Ahmad J. Alkasmi, Omar El Hamamsy, Abdur-Rahim Syed, & Luay Khoury, 2022)*

According to *(ITU & Munira Aminova, 2019)* the report indicates that **Morocco** ranked first among Arab countries in terms of newly registered startups and entrepreneurial ventures, followed by the **United Arab Emirates** and **Algeria**. This performance can be attributed to several factors:

- The establishment of innovation- and entrepreneurship-driven economic ecosystems;
- The integration of entrepreneurship education into university curricula;
- Government support for individual entrepreneurial initiatives and innovative projects across various sectors;
- The provision of business support institutions and entrepreneurial assistance mechanisms;
- Continuous adaptation to global technological developments and the progressive transition toward a knowledge-based economy.

Consequently, entrepreneurship has become a strategic priority within national economic agendas across the MENA region, given its crucial role in attracting investment, fostering technological advancement, and addressing a wide range of socio-economic challenges.

c) The Current State of the Startup Innovation Ecosystem in the MENA Region

The strategic geographical location of the Middle East and North Africa (MENA) provides direct access to major markets in Europe, Africa, and Asia, thereby encouraging countries in the region to promote investment and innovation. Coupled with a predominantly young population, these advantages have significantly contributed to the rapid development of the regional startup ecosystem.

The MENA region currently comprises **22 startup ecosystems**, several of which are ranked among the **top 100 startup ecosystems worldwide** in terms of ecosystem quality and entrepreneurial performance ***:***(David, Global Startup Ecosystem Index , 2022) According to the report , **israel** ranks first as the leading startup ecosystem in the Middle East and Africa. It is followed by the **United Arab Emirates (UAE)**, which ranks second regionally and twenty-seventh globally in the **2021 Global Startup Ecosystem Ranking**. The UAE's entrepreneurial ecosystem is distinguished by several key characteristics:

- Strong governmental support for entrepreneurship and youth-led initiatives;
- Significant investment in technology and digital transformation;
- Continuous investment in human capital development;
- Economic policies designed to support small and medium-sized enterprises (SMEs) and innovative startups;
- Comprehensive support mechanisms accompanying startups throughout their different stages of development;
- The presence of globally successful startups, such as **Careem**, which originated in the UAE;
- A highly attractive environment for foreign direct investment;
- A strategic transition toward a knowledge-based economy.

Investment activity constitutes one of the most reliable indicators of the vitality of a startup ecosystem, as it directly influences entrepreneurial growth and innovation capacity. Within this context, **impact investing** refers to investments that intentionally generate measurable positive social and environmental outcomes while simultaneously producing financial returns. Such investments

may target returns below market rates depending on the strategic objectives of investors (magnitt, 2021)

According to (magnitt, 2021) report, the Impact Investment Deals in the MENA Region (2016 – Third Quarter of 2021) highlights the following findings:

- Between 2016 and the third quarter of 2021, approximately USD 444 million was invested through 403 impact investment deals involving startups generating positive social and environmental outcomes in the MENA region.
- Saudi Arabian startups accounted for the largest share of impact investment transactions (20%), whereas startups in the United Arab Emirates attracted the highest proportion of total impact investment value (37%) during the same period.
- Educational technology (EdTech) and healthcare technology (HealthTech) together represented approximately 40% of all impact investment deals completed within the MENA startup ecosystem.

Based on these indicators, the United Arab Emirates has emerged as the regional leader in startup investment and innovation. Consequently, the following section examines the UAE's entrepreneurial ecosystem as a successful model of innovation-driven economic development.

- **The United Arab Emirates as a Leading Startup Ecosystem**

Over the past decade, the UAE startup ecosystem has experienced remarkable growth, driven by comprehensive regulatory reforms, simplified business incorporation procedures, progressive visa policies, and a wide range of government-led entrepreneurship support programs.

Furthermore, the UAE has continuously improved its business environment by facilitating commercial activities and strengthening its attractiveness to foreign investors. According to the **United Nations Conference on Trade and Development (UNCTAD) Investment Report 2022**, the UAE ranked **first in the Arab world and nineteenth globally** in attracting foreign direct investment (FDI). It also ranked **seventeenth worldwide** in outward FDI flows, amounting to **USD 22.5 billion in 2021**, representing a **19% increase** compared with 2020 *(UAE MINISTRY OF ECONOMY, 2022)*.

The data in the report of *(INDEX THE GLOBAL INNOVATION, 2015)* indicate that the number of technology-based startups in the UAE increased by **19%** between 2012 and 2015, accounting for approximately **17% of all technology startups in the MENA region**. This remarkable growth reflects continuous improvements in the country's innovation ecosystem and sustained governmental efforts to transform the economy from one primarily dependent on hydrocarbons toward a diversified knowledge-based economy.

Between **2018 and 2019**, the UAE introduced several reforms aimed at improving the entrepreneurial environment, including reducing business registration costs, lowering company establishment fees, strengthening minority investor protection through enhanced corporate governance regulations, accelerating export procedures, digitalizing administrative services, and reducing import costs (Dtec, 2021)

- **Dubai Silicon Oasis: A Model of an Innovation-Driven Ecosystem**

The United Arab Emirates established a high-tech free zone known as **Dubai Silicon Oasis (DSO)** to provide an integrated environment for living, working, and innovation. Founded in **2004**, Dubai Silicon Oasis covers an area of **7.2 square kilometers** and offers a comprehensive technology ecosystem designed to support startups and technology-intensive enterprises. Significant investments have been made in advanced infrastructure to meet the growing technological needs of businesses operating in the Middle East.

Among the major advantages offered by Dubai Silicon Oasis are **100% foreign ownership**, full tax exemptions, state-of-the-art infrastructure and facilities, streamlined company registration and licensing procedures, as well as access to extensive regional and international networks of business partners and professional advisors (Dtec, 2021)

Dubai has consequently become one of the world's leading cities for startup creation, particularly in the technology sector. It ranks **ninth globally** in terms of administrative services and market connectivity. Estimates indicate that the number of innovative projects and startups operating in Dubai reached **151,875 in 2019**, representing a **compound annual growth rate (CAGR) of 9%** compared with **72,695 enterprises in 2008**.

The service sector accounted for the largest share of startup activity, contributing approximately **47%** of total value added, followed by the trade sector (**43%**) and manufacturing (**10%**) *(Dtec, 2021)*

Financial Technology (**FinTech**) has emerged as one of the fastest-growing sectors supporting startup development in the region. It became the leading investment sector in the MENA region during **2018 and 2019**, recording an average annual growth rate of approximately **39%** since 2012.

Dubai has also witnessed remarkable growth in technology-based startups, attracting the attention of multinational corporations seeking acquisition opportunities. Notable examples include **Uber's acquisition of Careem** in a transaction valued at **USD 1.3 billion**, as well as **Amazon's acquisition of Souq.com**, one of the region's largest e-commerce platforms *(Dtec, 2021)*

The UAE has also pursued an ambitious strategy to increase the contribution of the non-oil sector to **80% of Gross Domestic Product (GDP)**, reflecting its long-term commitment to economic diversification.

In 2018, both oil and non-oil investments contributed significantly to GDP. The distribution highlights the continuing importance of the oil sector while also reflecting the growing role of non-oil investments in supporting economic diversification and sustainable economic development in the United Arab Emirates *(UAE ministry of economy, 2019).*

- **Key Factors Behind the Strength of the UAE Innovation Ecosystem**

The outstanding performance of the UAE's startup ecosystem can be attributed to several interrelated factors:

- The UAE ranked **25th among the world's most competitive economies** in the **Global Competitiveness Report 2019**, while maintaining the leading position within the Middle East.
- The country benefits from a strategic geographical location, strong financial reserves, extensive international partnerships, continuous government investment in infrastructure, digital transformation, and innovation.

- The UAE ranks **16th globally** in terms of the ease of doing business.
- It has implemented comprehensive strategies aimed at attracting highly qualified professionals in healthcare, scientific research, and advanced technology.
- The government provides numerous financial and institutional incentives designed to encourage entrepreneurship and private investment.
- The country possesses a strong and highly liquid banking system that facilitates access to finance and supports entrepreneurial activities.

4- Conclusion and results of the study

Entrepreneurship plays a fundamental role in addressing economic and social challenges while promoting sustainable growth and prosperity. In today's digital era, the integration of technological tools into business activities has become an essential prerequisite for building innovation-driven ecosystems.

This study examined startups and their innovation ecosystem within the Middle East and North Africa (MENA) region by evaluating the contribution of the startup sector to technological progress and economic development. The main findings of the study can be summarized as follows:

- Economic stability plays a crucial role in ensuring adequate financial resources, attracting domestic and foreign investment, strengthening infrastructure, and facilitating the transition toward a technology-based economy.
- A strong and mutually reinforcing relationship exists between startup development and the availability of an innovation-oriented entrepreneurial ecosystem.
- Government support through well-designed entrepreneurship policies and investment promotion programs is essential for fostering startup growth.
- High-quality infrastructure supported by skilled human capital constitutes a key source of national competitive advantage.
- Continuous development of legal frameworks, institutional structures, and information technology services is indispensable for strengthening the investment ecosystem.
- Reducing investment costs and improving the overall business environment are among the primary factors encouraging the establishment and expansion of technology-based startups.
- The availability of business support organizations, incubators, accelerators, and mentoring services is critical to ensuring startup success.
- A robust banking system represents one of the fundamental pillars of a successful entrepreneurial ecosystem by facilitating financial transactions and ensuring sufficient market liquidity.
- Promoting fair competition and preventing monopolistic practices contribute significantly to creating a healthy entrepreneurial environment.

- Political and social stability, together with open diplomatic and economic policies, are essential prerequisites for building globally competitive innovation ecosystems

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