
E-commerce in the Arab world: challenges and opportunities

Zahira Dahmani*

University of M'hamed Bouguerra, Boumerdes - Algeria

z.dahmani@univ-boumerdes.dz

Received: 15/02/2026

Wahiba Benchouk

University of M'hamed Bouguerra, Boumerdes - Algeria

w.benchouk@univ-boumerdes.dz

Accepted: 26/04/2026

Published: 31/05/2026

Abstract:

This study examines the state of e-commerce in the Arab region, focusing on disparities in growth rates compared to developed economies and identifying key opportunities and challenges. A descriptive-analytical approach was employed using secondary data from international reports and prior studies over the period (2014-2025). The compound annual growth rate (CAGR) was used to assess growth dynamics across a sample of eight Arab countries, selected based on data availability for indicators including e-commerce sales volume, digital usage rates, and technological infrastructure, reflecting demand, access, and infrastructure dimensions. The findings reveal significant variation in market size and growth rates across the Arab countries. Higher levels of e-commerce activity are associated with advanced digital infrastructure and more mature regulatory frameworks, while emerging markets exhibit higher growth despite smaller market sizes. The study also identifies a gap between internet penetration and service quality. It concludes that sector growth is driven by the interaction of infrastructure, digital literacy, and regulatory effectiveness. The study recommends improving internet quality, standardizing digital payment systems, strengthening regulatory frameworks, integrating e-commerce into national accounts, and drawing on international best practices such as those of the European Union.

Keywords: E-commerce; Arab World; Digital Transformation; Technological Infrastructure; Legislative Barriers.

Jel Classification Codes : L81 ; O33 ; O53 ; K24 ; M31

*Corresponding author

1. Introduction :

The continuous fast-paced evolutions of information and communication technology, along with the expansion of technological applications, have led to the emergence of many fields that touch upon all aspects of life. Furthermore, many methods of performing business and conducting various activities have evolved for both individuals and communities. E-commerce has appeared as a manifestation of this significant impact that technological advancements have had on commercial exchange processes through a digital intermediary such as the internet or networks that enable digital communication. E-commerce provides a new opportunity for many economies, including the creation of a broad movement for international trade and commercial exchanges, as it offers the ability to transcend borders and reduce effort and time (بوعبدالله و مشيكل، 2019، صفحة 49). Despite the notable growth witnessed by e-commerce in the Arab world over the past decade, this phenomenon still faces specific challenges related to the context in the Arab world, in addition to various repercussions and obstacles concerning its potential implementation. While the volume of global e-commerce continues to rise, its volume in Arab countries remains significantly limited, which calls for further efforts aimed at enhancing its growth and improving the share and participation of Arab countries in this form of commerce (المصليحي، 2023، صفحة 850).

In light of this, the aim of this research is to handle the issue of exploring the opportunities and obstacles related to the implementation of e-commerce in Arab countries, in order to provide a clearer understanding of this phenomenon. This is especially relevant given the significant differences in e-commerce growth rates between Arab countries and developed nations, despite the presence of some key factors, such as technological infrastructure, in certain countries. The importance of this research lies in the relevance and novelty of the topic it covers, especially with the various challenges that may hinder the expansion of e-commerce in the Arab world. This raises important questions about how to confront and overcome these challenges and capitalize on the available opportunities to improve this relatively new and vital sector.

The research draws upon the hypothesis which states that e-commerce in the Arab world faces several various challenges, whether cultural, economic, or related to infrastructure, legislation, and consumer culture. However, there are emerging opportunities that can be leveraged to improve the growth of this sector, particularly through government initiatives and the expansion of digital technology usage. Meanwhile, the research is considered among descriptive analytical studies. The descriptive analytical approach is a method of scientific research that is based on analyzing sufficient and relevant information about a specific phenomenon over unknown period or periods of time (مليح و العسولي، 2020، صفحة 37). This approach is considered suitable to the nature of the research due to the reliance on qualitative and quantitative data that can be collected, in a way that helps to analyze the reality of e-commerce in the Arab countries through reviewing the indicators associated

with it, and interpreting them. This is done by relying on secondary data obtained from reports and previous studies, with attention to analyzing the general trends in the development of e-commerce for example of Arab countries for which data related to the following indicators are available: (volume of e-commerce sales, rates of individuals' use of digital technologies, technological infrastructure), during the period (2014-2025). The research is also concerned with reviewing and analyzing previous literature, as well as the legislation and policies related to e-commerce in Arab countries, in addition to examining the reasons or factors that may hinder the growth of e-commerce in some countries.

2. The theoretical framework of the concept of e-commerce:

The significance of e-commerce lies in its role as one of the most crucial pillars that supports numerous businesses in the present era. E-commerce models have expanded significantly over the past decade, propelled by the global shift to conducting various business activities digitally or through mediums designed to facilitate commercial transactions, including buying, selling, payment processing, and money transfers via different channels. This expansion is supported by technological advancements and progress. Consequently, e-commerce has become a highly influential domain that impacts various sectors, institutions, and individuals alike.

The following section will present the theoretical framework related to the concept of e-commerce, its historical evolution, its main types, characteristics, and different forms of application across various contexts, as well as key factors influencing its adoption and implementation by both institutions and individuals.

2.1. Definition of e-commerce:

E-commerce, in its general concept, is regarded as the process of buying and selling goods and services through a network-based or internet-dependent communication system, utilizing digital electronic commands (عبدالعالی و سلمان، 2013، صفحة 6).

The term "e-commerce" consists of two words: The first, "commerce," is self-explanatory and refers to any economic activity undertaken by individuals with the aim of generating profit, involving the exchange of goods and services among individuals, institutions, and governments. The second word, "electronic," qualifies commerce and describes the method by which this economic activity is conducted, namely through electronic media and digital means. (الركابي، 2010، صفحة 12).

E-commerce is defined as the use of electronic media and the internet to conduct transactions involving goods and services. This necessitates that businesses have internet access, along with information technology resources such as electronic data exchange. This concept is closely tied to the presence of a website or the direct exchange of goods and services through a user-accessible platform (Jain, Malviya, & Arya, 2021, p. 665). Furthermore, e-commerce can refer to all transactions carried out using modern technologies to facilitate

commercial activities. This broader perspective allows for an expanded definition that encompasses various forms of digital trade.

E-commerce can be conducted through several channels: including purchasing and payment via wireless communication devices, computers, and mobile phones. This includes various activities such as shopping, purchasing, and making payments using digital currencies or traditional money. Examples include booking reservations online and using electronic banking services (Laudon & Traver, 2021, p. 28). In fact, e-commerce is not limited to buying and selling over the internet; it has expanded to include the sale of information, travel bookings, consultations, and the exchange of products and services using digital payment methods, as well as the establishment of virtual stores (مالكي، 2023، صفحة 199), and therefore, e-commerce can be defined as a process in which commercial activities; such as the buying and selling of goods and services, as well as the exchange and transmission of data and expertise are carried out through digital and electronic means. This enables businesses to generate revenue and complete transactions instantly and automatically, without requiring physical presence or traditional face-to-face interactions. Thus, e-commerce marks a transformative advancement over traditional trade practices, characterized by features such as instant transactions and the presence of a digital intermediary between the involved parties.

2.2. The origin and historical development of e-commerce:

The recent technological advancements and the emergence of new technologies have sparked a revolution in the business world globally. This has turned the internet and digital media into indispensable tools in business and commerce contexts, making e-commerce a viable reality. Even before the internet's existence, some forward-thinking entrepreneurs were already contemplating the potential of e-commerce. The rise of the e-commerce sector is a direct outcome of technological progress over the past fifty years, unfolding through several successive phases (Prachi & Nigam, 2023, p. 661). The current form of e-commerce, as a representation of business activities through electronic means, can be traced back to the early 1970s. Several innovations, including electronic money transfers, were introduced as early as (1970). However, these transactions were primarily limited to large corporations. This trend grew with the development of information exchange technologies and the advent of the internet, which initially had a narrow reach, affecting only a limited number of institutions. It wasn't until the early (1990s) with the advent of the World Wide Web that e-commerce saw significant expansion (الشناق و آخرون، 2019، صفحة 10). The concept of e-commerce became increasingly linked to the rise of the web, with the number of users steadily increasing throughout the (1990s). This growth spread to include not only retailers but also service companies and manufacturers. New applications also emerged, such as online stock trading and travel ticket sales, following the introduction of the web during this period (حجاج، 2013، صفحة 13).

E-commerce has gone through several significant milestones since the idea of its adoption first emerged, which have contributed to shaping the reality of trade today through the use of digital means, online buying and selling, and the execution of business transactions. This evolution began with the establishment of companies specializing in the development of this sector and led to the point where online business transactions have become a reality, conducted instantly and securely for millions of users worldwide. These key milestones can be summarized as follows (Prachi & Nigam, 2023, p. 662):

- The beginning of e-commerce can be traced back to the establishment of CompuServe, the first e-commerce company, during the historical events of (1969). Although the internet was not yet available, reliance was placed on telephone lines for electronic data exchange.
- The emergence of computers made the first online transaction possible. Transactions began to be processed online through companies such as Atalla Technovation and Bunker Ramo, which provided technologies to financial institutions in the United States in (1976).
- The emergence of what is known as electronic marketing led to the formal recognition of e-commerce in (1983), when the Electronic Commerce Law was enacted in California. This law included guidelines for programs developed to facilitate the purchase of goods and services through telecommunications networks.
- The opening of the electronic shopping center in (1984) by CompuServe, which allowed customers to purchase goods from approximately 100 different vendors.
- The emergence of the World Wide Web (WWW) in (1990) enabled retailers to reach a wide global audience, while consumers became more capable of searching for goods and services using the network.
- In August (1994), Phil Brandenberger purchased a compact disc (CD) on NetMarket, marking the first transaction to use encryption and the first secure transaction conducted over the web.
- In (1995), web marketplaces emerged as an innovative development pioneered by several entrepreneurs. This included the founding of eBay and Amazon, which were originally dedicated to selling books. In (1998), PayPal was introduced as the first electronic money transfer system, later integrating with online banking services.
- The rapid expansion of online stores after (2000) introduced numerous innovations across various sectors of e-commerce. A key milestone was the emergence of Shopify in 2006, which significantly facilitated the process of launching online stores for business owners.
- The rise of online grocery shopping and food delivery saw rapid growth in (2012), propelled by advancements in food storage, preservation, and delivery capabilities. By (2017), the value of e-

commerce transactions worldwide, which also includes business-to-business trade, had reached \$25.516 trillion.

The historical progression of e-commerce is essential for understanding how this trade model has developed, primarily driven by technological progress across various domains. This evolution has been accompanied by numerous innovations and technologies, gradually integrated into the concept of e-commerce, eventually shaping it into what we recognize today. While inventions like the development of computers, laptops, smart phones, and the emergence of companies that facilitated these advancements have been significant, the internet and the World Wide Web serve as the fundamental drivers of e-commerce's emergence and growth over the past decades. This is because internet connectivity is the key enabler for providing e-commerce services and allowing businesses and consumers worldwide to benefit from them. Nevertheless, e-commerce has faced several critical challenges, including global restrictions and crises that have caused setbacks at certain points in its development. The financial crisis in the technology market and the collapse of the dot-com bubble in the early (2000s) stand out as major historical shocks. These events forced many companies in the internet and technology sectors to file for bankruptcy. This had a negative impact on the growth of e-commerce, but it eventually recovered, coinciding with the adoption of short advertising content and URL-based marketing strategies by e-commerce companies (Prachi & Nigam, 2023, p. 663).

2.3. Characteristics and features of e-commerce:

Modern commerce heavily relies on information technology in computing and communications, requiring the restructuring of organizations and a focus on digital skills. This emphasis on digital competencies is a key foundation for adopting digital payment models and engaging in buying and selling through e-commerce. E-commerce is notably characterized by features such as administrative automation for both internal and external transactions, reduced office space requirements, enhanced transparency, and providing an intelligent customer experience to ensure satisfaction and retention. (القوفا و آخرون، 2011، صفحة 23). The characteristics of e-commerce can lead to significant transformations in business and marketing practices. This is because it enables direct relationships between parties, eliminating the role of intermediaries, thus allowing for higher levels of interactivity and bargaining power. Furthermore, e-commerce does not require the exchange of paper documents for conducting and executing transactions, as everything is carried out within a digital framework. This also allows for the delivery of various services and intangible goods directly through the network, overcoming geographic barriers and distances (إحسان، 2012، صفحة 216).

Compared to traditional commerce, e-commerce offers several characteristics that make it a distinct practice in its own right. Its widespread presence creates a favorable environment for the development of various sectors, making it a field that supports and aids numerous businesses. Unlike traditional commerce, e-commerce

allows for participation in business activities from anywhere and at any time, as it does not require a physical marketplace. Moreover, as a global technology, e-commerce enables extensive trade and offers significant advantages, such as the availability of information and assistance in decision-making due to its reliance on the web. This eliminates the need for face-to-face meetings to obtain information related to products and services (يحياي و يوسف، 2017، صفحة 184). E-commerce also features the ability to personalize by delivering tailored messages to individuals or groups, which sets it apart in terms of targeting and achieving the goals of both consumers and sellers. This personalization ensures improved communication quality, effectiveness, and a reduction in overall costs associated with the process (Shafiyah, Alsaqour, Alsaqour, & Uddin, 2013, p. 1358). When conducting a comprehensive comparison between e-commerce and traditional commerce, several clear distinctions in their characteristics and attributes emerge. These include differences in the methods of conducting business and the underlying principles. In e-commerce, product searches are conducted through web pages, and the processes of ordering, purchasing, and responding to requests are done electronically, via the web or email. This typically involves the user accessing a webpage or platform, browsing products, and being provided with detailed information, inquiries, and tools that help in the purchasing and payment process (حجاج، الصفحات 25-26). In contrast, traditional commerce does not primarily rely on these tools and does not involve communication for ordering and purchasing through the web or any digital and automated technologies, as is the case with e-commerce. E-commerce is characterized by its wide geographic reach, allowing businesses to target large segments of customers within an open time frame, often with a tendency to lower costs. On the other hand, traditional commerce is more limited in terms of its scope, geographic range, and responsiveness (مالكي، 2023، صفحة 203).

2.4. Forms and types of e-commerce:

E-commerce manifests in various forms and is conducted through multiple applications and levels, enabling it to serve a broad range of beneficiaries and become an effective model for completing commercial transactions between parties. The nature of the parties involved in e-commerce leads to several subtypes, which include the following:

- **Business-to-Business (B2B) trade:** This is a form of e-commerce where commercial transactions occur between two organizations or companies. An example of this type of trade includes placing purchase orders with suppliers, making financial and banking commitments, and processing bill payments between companies.
- **Business-to-Consumer (B2C) trade:** B2C is one of the most widely used forms of e-commerce, where businesses sell products or services directly to consumers. This model enables consumers to visit online

platforms or digital stores, explore various products and services, make their purchases, and choose their preferred payment method. Examples include popular retail platforms like Amazon and eBay.

- **Business-to-Government (B2G) trade:** This type of trade involves the private sector providing goods and services to the government. Government entities typically purchase from companies in the business sector, often through online procurement processes. This is usually seen when government agencies announce procurement opportunities and purchase requests via online platforms.
- **Government-to-Consumer (G2C) trade:** This refers to the delivery of government services to citizens via the internet and applications. In the realm of e-commerce, it is associated with the concept of e-government, which involves the electronic provision of government services to the public.

Another level of e-commerce involves the electronic services provided by nonprofit organizations, which use various forms of e-commerce to reduce costs, improve customer service, and manage the organization (الفوقا). The forms of e-commerce based on the active parties involved are one way to categorize e-commerce, demonstrating the wide reach and variety of stakeholders that can benefit from this type of technology. However, there are other classifications, such as the different e-commerce models based on retail versus wholesale trade, as seen in the Business-to-Business (B2B) model, as well as subscription models that enable recurring and automatic service purchases, and e-commerce based on digital goods and media (المصليحي، 2023، صفحة 854).

2.5. Fundamental components of e-commerce:

E-commerce requires several essential elements to be effective, including infrastructure, physical components, networks, communication, and the presence of the parties involved. These include modern equipment and cables for connectivity, software such as operating systems and specialized e-commerce software that enables transactions, along with services related to completing the transaction such as advertising, payment methods, eligibility verification, and delivery (عبدالعالي و سلمان، 2013، صفحة 11). E-commerce fundamentally relies on the internet, website engineering technologies, email, and databases (الركابي، 2010، صفحة 15). According to the World Trade Organization, e-commerce has three core pillars: the availability of communication infrastructure, a supportive business environment, and human resources. Additionally, the enabling conditions for e-commerce include digital skills, entrepreneurship, regulatory frameworks, and e-commerce logistics services (حسن و عبد السلام، التجارة الإلكترونية، 2021، صفحة 7).

E-commerce applications include specific tools designed to facilitate the various tasks and stages involved for both sellers and buyers. These tools feature payment systems like bank cards, smart cards, and digital currencies, along with tools for business transactions. In order to implement these applications, companies need effective management in addition to infrastructure, focusing on planning, organizing, and

developing appropriate strategies. Other supportive areas, such as business partners, marketing, advertising, and the establishment of favorable public policies, are also essential (حجاج، 2013، صفحة 24).

2.6. Motivations and factors affecting the growth of e-commerce:

The scale of e-commerce has increased markedly in recent years worldwide, accompanied by increased awareness of the benefits and advantages it offers, the emergence of technical facilitations, and the technological advancements witnessed on a global level. Certain factors, such as the outbreak of the COVID-19 pandemic, have accelerated the growth of e-commerce and expanded its applications at an unprecedented rate within a relatively short period of time. In (2020), the number of online shoppers worldwide increased by approximately 1.5 billion people, which represents a 7% rise compared to (2019), before the emergence of the pandemic's repercussions, which drove individuals to look for alternative shopping methods in light of health concerns and the restrictions imposed by the pandemic on direct commerce (حسن و عبد السلام، التجارة الإلكترونية، 2021، صفحة 18).

E-commerce relies heavily on modern technology, which makes it significantly affected by the growth associated with digital payment methods, information technology, and the contributions of human resources to ensure the success of the transition to this type of commerce. Furthermore, the advantages it offers prompt organizations to take into consideration the economic benefits it can provide (العوضي، 2010، صفحة 187).

E-commerce presents a number of advantages that have contributed to its adoption by both organizations and individuals, including the following (عبدالرحيم، 2012، الصفحات 231-230):

- Factors related to cost reduction compared to traditional commerce, as it does not require any physical stores, showrooms, or shopping centers. Moreover, it allows for a reduction in the number of employees and other operational expenses associated with maintaining a physical store.
- The ability to create an electronic record of the organization's activities, which aids in minimizing human errors and saving time and effort for businesses adopting e-commerce.
- Providing greater efficiency in marketing efforts, reducing temporal and spatial barriers, while improving the ability to identify competitors, conduct market research, and establish appropriate competitive strategies.
- Factors related to facilitating communication with partners and stakeholders through the use of e-commerce applications, such as email, software, and platforms that enable communication with suppliers and consumers.
- Ease of ordering and receiving products for consumers, as purchases can be made with one single click and delivered anytime, anywhere, without congestion. This provides flexibility in ordering and purchasing through e-commerce.

On the other hand, e-commerce applications provide a variety of tools and options for both sellers and buyers, which helps accelerate their adoption as a convenient means of conducting transactions and trade exchanges between parties. To complete these exchanges, the buyer selects the appropriate payment method offered by e-commerce, which includes both traditional payment methods and digital payment options provided by banking institutions through secure payment and collection systems. Technological advancements have contributed to enhancing payment options for users through various platforms, including digital payments via mobile phones, which now account for approximately 73% of total payment transactions in e-commerce (حسن و Factors related to service quality, the availability of support, and the benefits provided by the online store contribute to enhancing the effectiveness of the shift to e-commerce as a preferred method for users. The quality aspects of the website help shape the online user experience, which directly impacts customer satisfaction and their acceptance of electronic payments, as confirmed by several models such as the Technology Acceptance Model and comprehensive service quality models (Himawan, Wismantoro, & Susilowati, 2023, p. 133). This means that the factors and motivations driving the growth of e-commerce include a combination of advantages and characteristics offered by e-commerce in terms of its nature compared to other methods, which has led to the need for its transition or inclusion as an option for completing business transactions and trade exchanges. This has been further strengthened due to the emergence of many supporting technologies and tools that were enabled as a direct result of technological progress. Meanwhile, factors related to the website and the institution providing e-commerce services are important for the user, including ease of use, perceived benefits, reliability, and security, which optimize the user experience and their level of satisfaction.

3. The reality of e-commerce in Arab countries:

3.1. Regulation of e-commerce and related to legislation in the Arab countries:

Many Arab countries have taken steps to enact regulations and legislation concerned with organizing e-commerce practices. Qatar is considered among the first countries that issued a system to regulate commercial activities within the framework of the Law on Electronic Transactions and Commerce (No. 16 of 2010). This latter came to regulate all commercial transactions conducted through electronic means and to authenticate electronic signatures and electronic documents (Qatari Ministry of Justice, 2010). Saudi Arabia also issued the E-commerce Law under the umbrella of trade, economy, and investment regulations. The law was issued by Royal Decree No. (M/127) dated 10/07/2019. It aimed at regulating online transactions, protecting the rights of the consumer and the practitioner, and organizing the disclosure of data and electronic advertisements, in addition to addressing aspects of penalties for those who violate the provisions of the law with the aim of ensuring a safe digital commercial environment (Saudi Ministry of Commerce, 2019). In a similar way, the United Arab Emirates

issued federal decree No. 14 of 2023, with the aim of regulating trade through modern technological means. It addressed obligations and licensing related to the practice of digital business, disclosure of data, and the requirements of security and guarantees related to customer privacy and the security of their data (Federal Government, 2023). By 2022, most Arab countries had issued updated systems and legislation that addressed a set of dimensions of e-commerce and the regulation of transactions between the parties of trade through digital means. Table (1) below, shows the level of maturity of legislation and systems in the Arab countries under study, in terms of national strategies, inclusion in national accounts, and taxation.

Table (1): Level of maturity of legislation and systems in the Arab countries under study national strategies, and inclusion in national accounts and taxation

Country	Is there a national e-commerce strategy?	Is e-commerce included in the national accounts ?	Are there taxes on e-commerce ?
Uniter Arab Emirates	Yes	No	Yes
Saudi Arabia	Yes	Yes	Yes
Egypt	Yes	No	Yes
Bahrain	Yes	No	Yes
Qatar	Yes	No	Yes
Sultanate of Oman	Yes	No	Yes
Kuwait	Yes	No	Yes
Tunisia	Yes	No	Yes

Source : جمال قاسم محمود، محمود عبد السلام. (2023). دراسة حول إحصاءات التجارة الإلكترونية. أبوظبي الإمارات العربية المتحدة: صندوق النقد العربي، ص: 23.

3.2. The size of the e-commerce market in Arab countries:

E-commerce in the Arab world has witnessed significant growth in recent years, driven by the increase in internet usage and technological advancements. However, the size of e-commerce in Arab countries and its share of the total value of commercial transactions are often described as below expectations, mainly for numerous Arab countries that face various challenges in implementing e-commerce on a large scale. According to a report issued by the Arab Monetary Fund, the size of e-commerce in Arab countries accounts for only a small percentage (1%) of total global e-commerce, despite the rising global trend towards its application (محمود و عبد (E-commerce in Arab countries has not followed the same growth pattern in terms of levels of growth as in several other regions. Some Arab countries remain behind in technological development, including the shift to e-commerce (حسن و عبد السلام، التجارة الإلكترونية، 2021، صفحة 24).

Online shopping is considered as one of the emerging economic phenomena in the Arab world. Estimates indicate that there are around 30 million online shoppers in the region. The e-commerce market in the Arab world has witnessed significant growth in recent years, influenced by several factors, including the increase in internet usage, the spread of smartphones, and the shift in consumer behavior towards relying on digital solutions for purchasing. According to available data, the size of the business-to-consumer e-commerce market in the Arab world is about 7 billion dollars, distributed among several countries according to the level of online demand and the available digital infrastructure (صفحة 525، 2024، سليمان). Meanwhile, the total value of e-commerce in Arab countries, according to 2020 data, is about 22 billion US dollars (حسن و عبد السلام، التجارة الإلكترونية، 2021، صفحة 25).

Saudi Arabia, the United Arab Emirates, and Egypt come at the top of the countries that contribute the most to this market, in terms of the share of e-commerce sales in total retail sales, according to data from 2019. The share of e-commerce reached about 4.2% of total retail sales in the United Arab Emirates. In Saudi Arabia, it represents 3.8% of total retail sales, while in Egypt it is about 2.5% of total retail sales as well، (حسن و عبد السلام، التجارة الإلكترونية، 2021، الصفحات 25 - 27).

The data related to the share of e-commerce sales in total retail sales in these countries are consistent with the data on the volume of sales in US dollars. The value of e-commerce sales in the United Arab Emirates is about \$10.7 billion. In comparison, the volume of sales in Egypt and Saudi Arabia reaches \$9.9 billion, and \$6.3 billion respectively. Table (2) below shows the volume of e-commerce based on (2022) data for a number of Arab countries:

Table (2): E-commerce sales volume in selected Arab countries (US billion dollars) :

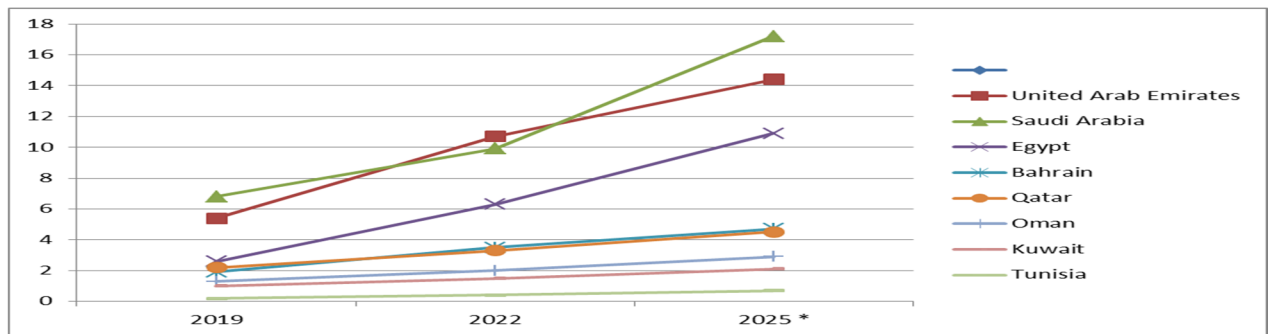
Country	2019	2022	2025 *(Projected)	Compound annual growth rate (2025 – 2019)
United Arab Emirates	5.4	10.7	14.4	17.8%
Saudi Arabia	6.8	9.9	17.2	16.7%
Egypt	2.6	6.3	10.9	27.0%
Bahrain	1.9	3.5	4.7	16.3%
Qatar	2.2	3.3	4.5	12.7%
Sultanate of Oman	1.3	2.0	2.9	14.3%
Kuwait	1.0	1.5	2.1	13.2%
Tunisia	0.2	0.4	0.7	23.2%

*The volume of e-commerce 2025 was estimated by calculating the projected growth based on actual historical data.

Source: جمال قاسم محمود، محمود عبد السلام. (2023). دراسة حول إحصاءات التجارة الإلكترونية. أبو ظبي الإمارات العربية المتحدة:

صندوق النقد العربي، ص: 24_27.

The data related to the volume of e-commerce in each of the following countries: (The United Arab Emirates, Saudi Arabia, Egypt, Bahrain, Sultanate of Oman, Qatar, Kuwait and Tunisia), indicates variations in the size of e-commerce activity across these countries. This reflects differences in the levels of domestic economies and the overall size of trade, including e-commerce. It can also be explained by the weak spread of electronic payment systems and supporting digital infrastructure in some countries. The volume of e-commerce in 2025 reaches 17.2, 14.4, and 10.9 billion US dollars in Saudi Arabia, the United Arab Emirates, and Egypt respectively. However, it is relatively lower in the remaining countries. Tunisia records the lowest level of e-commerce sales compared to the rest of the sample countries, as it reached 700 million US dollars in 2025. This is despite the fact that merchandise trade (as a percentage of GDP) in Tunisia represent 89.4%, while in other Arab countries such as Egypt 33%, Qatar 59.4%, Kuwait 70.6%, and Bahrain 84.7%. It is lower according to the World Trade Organization and World Bank estimates of GDP. This indicates a lag in some Arab countries regarding the transition to e-commerce compared to other Arab countries. Figure one below illustrates the growth trends of e-commerce sales in the Arab countries included in the study:



Source: prepared by the two researchers based on e-commerce statistics - Arab Monetary Fund

جمال قاسم محمود، محمود عبد السلام. (2023). دراسة حول إحصاءات التجارة الإلكترونية. أبو ظبي الإمارات العربية المتحدة: صندوق النقد العربي، ص ص: 24_27.

The compound annual growth rate was calculated based on data on the volume of e-commerce in the sample countries over the period (2019- 2025). This helps in measuring the dynamics of market growth and overcoming the limitation of direct comparison between the absolute values of e-commerce volumes across countries, using the following formula:

$$CAGR = \left(\frac{V_{final}}{V_{initial}} \right)^{\frac{1}{n}} - 1$$

Where:

V_{final} = The volume of e-commerce in 2025

$V_{initial}$ = The volume of e-commerce in 2019

n = The number of years between the beginning and the end of the measurement period = 6 years.

It is observed that both Egypt and Tunisia are among the leading countries in the sample in terms of the compound annual growth rate of e-commerce sales. In contrast, the United Arab Emirates, Saudi Arabia, and Bahrain show a relatively moderate growth rate. Oman, Kuwait, and Qatar record the lowest rates in terms of the annual growth of e-commerce volume. It can be explained by the fact that countries with already high levels of e-commerce have effectively invested in developing their e-commerce systems, along with higher spending levels and more mature markets. This has resulted in a high level of trade volume but a relatively limited growth rate. On the other hand, in developing economies such as Tunisia and Egypt, the markets are still emerging and in a growth phase with a higher rate of acceleration compared to more mature markets.

3.3. Technological infrastructure in the Arab world:

The digital infrastructure and related components that activate the growth of e-commerce in Arab countries are of fundamental importance. In addition to the human and organizational requirements, e-commerce requires the presence of network and computer components as well as digital infrastructure. According to Tarchi and Bouflih (2018), the requirements related to information and communications are considered an essential component of e-commerce, as there is no e-commerce without technological means, which are represented in all tools integrated into the computer system that allow for connecting devices and components of the e-commerce system, exchanging data, transferring it, and enabling access to systems (طرشي و بوفليح، 2018، صفحة 39). The digital infrastructure in Arab countries is promising in several aspects, yet it may still fall short of expectations, especially in light of gaps and disparities in the levels of technology application and reliance on computers and mobile phones, as well as the presence of supportive infrastructure. Some countries, such as the United Arab Emirates, Qatar, Bahrain, and Saudi Arabia, stand out with high coverage rates and high usage rates of mobile phones and personal computers, while other Arab countries still exhibit weak coverage rates (مجير، 2006، الصفحات 58-57). The percentage of mobile phone users in Arab countries has grown significantly over recent years, surpassing the global average, but remains below the level when compared to regions such as the European Union. Furthermore, the population of the Arab world covered by third-generation communication networks is 448 million people, according to 2022 data, with an increasing rate compared to previous years (محمود و عبد السلام، دراسة حول إحصاءات التجارة الإلكترونية، 2023، صفحة 5).

Tables (3-5) present some estimated key indicators of the information Network in selected Arab countries included in the study sample:

Table (3): Percentage of individuals using the internet in some Arab countries

Country	Percentage of individuals using the internet in some Arab countries			
	2014	2017	2021	2025
UAE	90.4	94.8	100	100
Saudi Arabia	64.7	94.7	100	100
Bahrain	90.5	95.8	100	100
Qatar	91.5	97.4	99.6	98.1
Kuwait	78.7	97.9	99.7	100
Sultanate of Oman	70.2	80.2	95.2	95.3
Tunisia	46.2	55.5	68.3	76.5
Egypt	33.9	44.9	72.1	74.6

Source : World.Bank.Group. (2026). *Individuals using the Internet (% of population)*. Retrieved from data.worldbank.org: <https://data.worldbank.org/indicator/IT.NET.USER.ZS>

Table (4): Number of Internet subscriptions - broadband subscriptions per 100 inhabitants

Country	Number of Internet subscriptions - broadband subscriptions per 100 inhabitants			
	2014	2017	2021	2025
UAE	13.2	29.9	36.5	40.8
Saudi Arabia	15.4	21.6	33.8	44.1
Bahrain	21.9	13.1	16.5	17
Qatar	10.2	9.5	11.1	11.8
Kuwait	1.3	2.8	1.6	-
Sultanate of Oman	4.4	7.5	11.6	11.1
Tunisia	5.1	6.9	12.4	15
Egypt	3.2	5	9.8	11.7

Source : World.Bank.Group. (2026). *Fixed broadband subscriptions (per 100 people)*. Retrieved from data.worldbank.: <https://data.worldbank.org/indicator/IT.NET.BBND.P2>

Table (5): mobile Cellular subscriptions per 100 inhabitants

Country	Mobile Cellular subscriptions per 100 inhabitants			
	2014	2017	2021	2025
UAE	204.2	214.7	186.3	203.2
Saudi Arabia	181.3	130.6	145	159.5
Bahrain	177.4	159.6	128.1	159.6
Qatar	149.0	147.4	137.7	153.6
Kuwait	207.3	171.8	158.6	-
Sultanate of Oman	153.8	148.8	135.1	120.6
Tunisia	126.7	123	129.8	117.6
Egypt	97.7	99.2	84.1	97.1

Source : World.Bank.Group. (2026). *Mobile cellular subscriptions (per 100 people)*. Retrieved from data.worldbank: <https://data.worldbank.org/indicator/IT.CEL.SETS.P2>

The data in table (3) show a clear trend toward digital saturation in the Gulf countries compared to other Arab countries. The United Arab Emirates, Saudi Arabia, Bahrain, and Kuwait have all reached a usage rate of

around or close to 100% by the period (2019-2025). This indicates the near-complete spread of internet access among individuals, and means that the internet is available and used by almost 100% of the population in this countries. In contrast, countries such as Tunisia and Egypt show noticeable gradual growth where the share of internet users increased from 33.9%, 74.6%. However, this level is still below full saturation as seen in some more advanced countries, which may indicate a digital divide linked to factors such as infrastructure and the level of digital transformation. A slight stability or marginal decline is also observed in some highly digitalized countries such as Qatar in 2025. This may suggest that the market has reached a saturation point where growth becomes limited, or shifts from quantitative expansion to more qualitative factors.

In addition, the data in tables (4) and (5) show a kind of mismatch between internet penetration and infrastructure density. Even though user rates are high, broadband subscriptions do not rise at the same level in some countries, such as Qatar and Bahrain. This may point to a stronger dependence on mobile internet rather than fixed Broadband connections. It is also noticeable that mobile subscriptions go beyond 100 per 100 inhabitants in all the Arab countries in the sample, except Egypt. This suggests a high level of usage, where individuals often have more than one mobile subscription.

In terms of the development of the information and communication technology infrastructure index in Arab countries, there are clear differences between them. Some Arab countries are placed at relatively Advanced levels on this indicator. The value of ICT infrastructure index reaches 89.3 points in the United Arab Emirates, 87.7 points in Kuwait, and 85.0 points in Saudi Arabia according to 2024 data. This also reflects an improvement in these countries compared to previous years. On the other hand, the value remains relatively low in other Arab countries, such as Morocco, Lebanon, and Algeria, compared to the countries at the top of the list. Table (6) below represents a comparison between the index values and the global ranking of a number of Arab countries in both 2014 and 2024, which reflects the extent of change over a period of 10 years.

Table (6): information and communication technology infrastructure index in some Arab countries

Country	2014		2024		Progress in global ranking
	Value	Global rank	Value	Global rank	
UAE	71.2	18	89.3	13	5 +
Kuwait	38.3	69	87.7	17	52 +
Saudi Arabia	61.8	27	85.0	26	1 +
Sultanate of Oman	52.4	38	79.1	46	8 -
Bahrain	68.0	21	77.1	50	29 -
Qatar	66.5	23	71.6	70	47 -
Jordan	29.6	91	71.6	71	20 +
Tunisia	35.6	75	64.3	81	6 -
Egypt	48.9	48	60.7	85	37 -
Morocco	40.8	62	59.9	89	27 -
Lebanon	43.8	53	53.1	98	45 -
Algeria	18.4	116	52.8	99	17 +

Source: WIPO. (2014). The Global Innovation Index. WIPO. Retrieved March 6, 2025, from:

https://www.wipo.int/edocs/pubdocs/en/economics/gii/gii_2014.pdf

WIPO.(2024).Global Innovation Index. WIPO. Retrieved March 6, 2025, from: https://www.wipo.int/web-publications/global-innovation-index-2024/assets/67729/2000%20Global%20Innovation%20Index%202024_WEB3lite.pdf

The Information and Communication Technology infrastructure index data is derived from a model developed by the World Intellectual Property Organization (WIPO) in partnership with INSEAD and Cornell University. The index is calculated as the arithmetic mean of four distinct indicators: the ICT access index, the ICT usage index, the e-Government services index, and the e-participation index (WIPO Global Innovation Index, 2025). The previous table (Table 6) illustrates, based on data from both 2014 and 2024, the significant disparity among Arab countries in terms of the development levels of ICT infrastructure, including e-participation rates and usage and access percentages.

The researchers calculated the change in the global ranking of the ICT infrastructure index for Arab countries, with the aim of assessing the progress or decline of the countries under study compared to the rest of the world over a 10 year period (from 2014-2024). This was done using the following formula:

$$\text{Degree of progress/ decline} = \text{global rank in 2014} - \text{global rank in 2024}.$$

All Arab countries have experienced an increase in the overall value of the Information and Communication Technology infrastructure index. However, some Arab countries have declined in terms of global ranking. The most advanced countries include the United Arab Emirates and Kuwait. Over the course of 10 years, the UAE saw a significant leap, rising from 71.2 (ranked 18th) in (2014) to 89.3 (ranked 13th) in (2024), reflecting substantial investments in digital infrastructure, including improvements in the ICT access index, ICT usage index, e-Government services index, and e-participation index. Kuwait also experienced tremendous growth, moving from 38.3 (ranked 69th) to 87.7 (ranked 17th), securing second place in (2024) in terms of the index value among Arab countries.

Within the countries included in the sample, Saudi Arabia shows some improvement. The index value rises from 61.8 to 85.0. Its position in the global ranking moves slightly, reaching rank 26, which is just one place higher than before. For the other countries, the picture is different. Oman, Bahrain, Qatar, Tunisia, Egypt, and Lebanon all move down in the global ranking compared to 2014. Qatar, in particular, records a sharp drop. It goes from rank 23 in 2014, to rank 70 in 2024, which means a decline of 47 positions. This can be read as a sign that progress in ICT infrastructure in these countries has been slower when compared to other countries worldwide. This matters, especially since improving technological infrastructure is usually seen as a basic requirement for economic development and remains an important focus at the global level

4. Opportunities and challenges of e-commerce in Arab countries:

Despite the varying realities regarding e-commerce and infrastructure levels, there are several opportunities available and future prospects regarding the growth of e-commerce at the Arab level. The future of e-commerce globally and internationally is headed toward growth and development, and the Arab countries are no exception. Below, we review a number of key points related to the future of e-commerce and its growth at the level of Arab countries.

4.1. Opportunities for e-commerce growth in the Arab world:

This section explores the primary drivers and structural catalysts fostering the rapid expansion of e-commerce within the Arab region, highlighting the synergy between technological advancements, financial innovation, and strategic government initiatives.

4.1.1. The spread of the internet and smart phones:

The spread of the internet, smart phones, and personal computers is among the most prominent factors that could enhance the opportunities for the growth of e-commerce in the Arab world. The internet, or the World Wide Web, serves as the space through which all e-commerce transactions, buying and selling of products and services, in addition to exchanging digital content and transferring ownership of intangible goods such as digital materials, are carried out. Some Arab countries occupy advanced positions in terms of internet and smart phone usage and penetration, with the percentage of personal computers with internet access exceeding 80% of the population in several Arab countries, led by Bahrain and Qatar, which rank seventh and eighth globally, respectively (الحسن، 2015، صفحة 249). The percentage of individuals in the Arab world spending two or more hours daily online exceeds 70%, and 43% of users in the Arab countries engage in activities related to shopping and retail transactions via the internet on a monthly basis (Salem, 2017, p. 17).

4.1.2. Innovation in payment methods:

Many Arab countries have witnessed the development of digital payment methods, which enhance innovation in creating secure and easy-to-use payment options for individuals and businesses, something that could contribute to the growth of e-commerce in the future. Electronic payment systems help achieve financial and monetary stability, supporting economic growth while emphasizing the importance of payment systems for

central banks to ensure secure payment services. With the expansion of contactless payment methods, particularly after COVID-19, retail payment processes have improved, which has enhanced financial inclusion and facilitated financial transactions. Some types of financial technologies in the electronic payment sector for retail include: electronic payment gateways through various payment cards and methods, as well as the emergence of e-wallets via smart phones and smart watches, in addition to payment links and near-field communication technologies that provide dynamic data authentication features (إضاءات، 2023). With the ongoing development in payment methods, the e-commerce sector in Arab countries could reach more segments of society that will be able to make payments and receive money through various methods.

4.1.3. The development of delivery and logistics services:

Development of logistics services, transportation, and delivery in various forms provides prospects for the growth of e-commerce in Arab countries, as companies specializing in transportation and delivery, along with digital applications designed for this purpose, help enhance, enable, and facilitate e-commerce activities. Several Arab countries, such as the United Arab Emirates, Qatar, Saudi Arabia, and Oman, lead the logistics services index, including shipment organization, tracking and monitoring, and the quality of shipping and logistics services (بربري، 2023، صفحة 7). As the transportation, delivery, and logistics sector continues to grow, including the spread of applications that replace intermediaries in the goods transport process, e-commerce will be positively impacted, as it requires an effective, fast, and secure network to ensure the delivery of products and items associated with online buying and selling transactions.

4.1.4. Government support and Arab development initiatives:

Many Arab countries have launched plans and initiatives aimed at developing the e-commerce sectors and related commercial sectors. These plans announced by the governments of Arab countries include providing support and developing the necessary infrastructure, which will help support the growth of e-commerce to become one of the pillars of the economy in the future. Among the countries that have adopted a comprehensive strategy for development and digital infrastructure development are: the Kingdom of Saudi Arabia through the pillars of its Vision and National Transformation Initiatives, and the United Arab Emirates, which has adopted a national strategy for digital government along with supporting programs to provide high-level digital infrastructure (محمود و عبد السلام، دراسة حول إحصاءات التجارة الإلكترونية، 2023، صفحة 14).

4.2. Challenges of e-commerce in Arab countries:

Despite the existing opportunities for the transition to e-commerce and the expansion of its applications in Arab countries, there are serious challenges and difficulties facing most Arab countries in this field. Legislative and legal challenges are considered one of the main issues that could slow down the growth rate of e-commerce in Arab countries. Without clear legislation and laws to regulate all forms of e-commerce, all transactions between parties will be chaotic. The delay in some Arab countries in enacting clear legislation regarding e-commerce transactions is one of the issues that requires immediate attention (شريف، تقوروت، و حسان، 2020).

(صفحة 130) Legal barriers are among the challenges that could limit the growth opportunities of e-commerce in Arab countries, in light of the absence of regulating laws or the inflexibility of some laws, or their lack of suitability for implementation in the context of e-commerce (صفحة 60, 2019, بوعبدالله و مشيكل). Moreover, e-commerce in Arab countries lacks the technical infrastructure and qualified human resources when compared to developed countries globally. E-commerce in Arab countries also faces challenges related to sustainability, business development, the small size of consumer-targeted businesses, and the narrow scope of some sectors associated with e-commerce (صفحة 103, 2014, حسين). A suitable environment for the development of e-commerce is not available for many developing Arab countries. These countries also require significant investments in internet, telecommunications, and infrastructure to enable them to bear the burdens and risks of e-commerce (صفحة 96, 2011, كورتل).

Among other obstacles, it is noticeable that many Arab countries lack economic capacities and capabilities, which creates barriers related to the development of e-commerce practices. Several economic and cultural barriers emerge for institutions and individuals who are the parties involved in e-commerce systems. These barriers include the following (الصفحات 60-61, 2019, بوعبدالله و مشيكل) :

- Lack of experience among institutions regarding market requirements and the incompleteness of the necessary information to engage in e-commerce. There is also fear or uncertainty regarding the opportunities for entering e-commerce, especially since there are giant companies and conglomerates that dominate international markets and e-commerce with foreign entities.
- Failure to consider the necessary security requirements for the success of online transactions, as they differ in some aspects from conducting traditional commerce.
- Lack of sufficient awareness and understanding regarding the opportunities that institutions will miss and the delays that may affect institutions in Arab countries due to the failure to keep up with the digital transformation and development that supports e-commerce.
- Cultural barriers related to the consumer, which may include the reluctance of consumers in Arab countries to accept e-commerce and their preference for traditional commerce, which involves inspecting goods and direct communication with sellers. Furthermore, there are illiteracy rates and ignorance in dealing with electronic tools, as well as a lack of knowledge on how to conduct transactions online.

The cultural challenge is considered one of the most significant challenges that could impact the growth opportunities of e-commerce in the Arab world. Even if various technical and regulatory issues are addressed, and the capabilities of institutions are enhanced with a suitable environment and climate, some individuals or institutions may exhibit forms of resistance or rejection to transformations in this field. The Arab world, in general, lacks a culture of digital electronic transactions, and even though there are some signs of change among the younger generations, a portion of Arab consumers still prefer traditional commercial transactions. They may

have concerns about engaging in online commerce or may not know how to conduct these transactions in the first place (شريف، تقوروت، و حسان، 2020، صفحة 129). To overcome this, raising awareness about e-commerce and its methods, along with providing easy tools and options for consumers in Arab countries, is crucial. Governments and official institutions have a responsibility that should not be overlooked in this regard.

5. Conclusion:

The study aimed to explore the opportunities, challenges, and barriers linked to the application of e-commerce in Arab countries, especially in light of the noticeable differences in e-commerce rates growth rates between Arab countries and developed ones. It relies on a descriptive analytical approach, using secondary data issued by international official bodies and previous statistical studies. At the same time, it calculates the compound annual growth rates of e-commerce volume and looks at changes in infrastructure, usage, and Regulatory indicators in a number of Arab countries. The study is applied to a purposive sample of Arab countries, based mainly on the availability of data during the study period and the possibility of comparison. This helps to give a more complete picture of the situation of e-commerce in Arab countries and the challenges it faces.

By analyzing the set of indicators related to market size, digital infrastructure and digital knowledge, as well as the regulatory and legislative environment, it becomes clear that there are differences between Arab countries in terms of the size of e-commerce and its growth rates. This reflects differences in the level of maturity of digital markets, the efficiency of technological infrastructure, and how developed the support and legal frameworks are. The results also suggest that countries with more advanced digital infrastructure and clear regulatory frameworks such as the United Arab Emirates and Saudi Arabia tend to record high levels of e-commerce activity. In contrast, countries with less developed infrastructure show lower market size and still face real challenges, with growth rates that remain below expectations in terms of applying e-commerce. At the same time, some countries with emerging and less mature digital markets such as Tunisia and Egypt, shall relatively higher growth rates in e-commerce sales. However, this is linked to their delayed position compared to more advanced Arab countries in terms of ICT infrastructure. This can be understood in the sense that these countries are still in a phase of expansion, while more mature markets tend to move toward more stable growth rates.

It becomes clear that e-commerce is one of the features of development in the modern era. It is based on a range of emerging technologies that have played a major role in advancing this field, especially with the broader technological and digital progress and Innovation across different areas. Technological development has brought major changes to many aspects of life at the global level. As a result, the internet and digital tools have become essential in business and trade contexts, and are no longer optional. E-commerce practices have also developed over the past decades. They started as a relatively new tool, than expanded more widely during the 1990s and early 2000s with the spread of the internet and the growth of online stores. E-

commerce offers several advantages. Among the most important is the removal of time and space barriers, which allows access to markets at any time and from any place. It also helps reduce costs and improve the efficiency of targeting audiences, making it easier to reach customers from a marketing perspective.

Despite the existing challenges, there are also clear opportunities that can support the growth of e-commerce in Arab countries. These include the wide spread of the internet and smartphones, the development of electronic payment methods, improvements in logistics services, and government initiatives that aim to strengthen the digital economy. At the same time, there are still key challenges. These include legislative issues, weaknesses in some parts of the infrastructure, as well as cultural and behavioral factors related to Consumer trust in digital transactions.

In light of the results reached by the study, the following recommendations can be proposed:

- Directing investments toward improving the quality of internet services in Arab countries especially in terms of expanding fixed broadband services in countries where there is a gap between high user traits and low subscription density. This could have a positive effect on the efficiency and speed of carrying out e-commerce transactions.
- Working toward unifying digital payment standards, particularly among Arab countries, and develop more consistent legal and regulatory frameworks across these countries. This can be supported by drawing on the experiences of more advanced countries and regional blocks such as the European Union.
- There is a need to update the current laws and regulations in Arab countries so that they remain clear and protect the rights of all parties. This should go in line with the fast changes in e-commerce and digital transformation, as well as the emergence of new tools and technologies. It is also important to connect these laws with practical policies that encourage the use of e-commerce, and to work toward building integrated government digital platforms to manage online business activities.
- It is also crucial to develop national statistical methods to measure the contribution of e-commerce to GDP. This can help in following the growth of e-commerce more accurately and linking it to infrastructure development. It also helps in giving a clearer picture of e-commerce as part of modern business activity.

The current study focused on exploring the challenges and opportunities related to e-commerce in Arab countries. At the same time, it is limited to reviewing the existing literature and describing the situation in a number of Arab countries based on specific indicators. Based on this, future research could look more into comparing policies, programs, and regulations across Arab countries in the area of e-commerce. It may also be useful to consider the experience of some developed countries in order to benefit from them and support the development of the e-commerce in the Arab world, and keep up with technological progress. There is also room for more detailed studies that examine current challenges in a deeper way, identify weak points,

and look at possible future risks, along with ways to confront them in the context of e-commerce.

6. List of references:

1. Himawan, H., Wismanoro, Y., & Susilowati, W. (2023). Factors Affecting E-Commerce Success. *International Journal of Business, Economics and Law*, 19(1), 133-137.
2. Jain, V., Malviya, B., & Arya, S. (2021). An Overview of Electronic Commerce (e-commerce). *Journal of Contemporary Issues in Business and Government*, 27(3), 665-670.
3. Laudon, K., & Traver, C. (2021). *E-Commerce: Business, Technology, Society*. England, London: Pearson.
4. Prachi, K., & Nigam, V. K. (2023). Evolution of E-Commerce Industry; A Brief History of Evolution of e-commerce. *Journal of Emerging Technologies and Innovative Research*, 10(4), 660-667.
5. Salem, F. (2017). *The Arab World Online 2017-2021: Digital Transformations and Societal Trends in the Age of the 4th Industrial Revolution*. Retrieved from <https://ssrn.com/abstract=3059445>
6. Shafiyah, N., Alsaqour, R., Alsaqour, O., & Uddin, M. (2013). Review on Electronic Commerce. *Middle- East Journal of Scientific Research*, 18(9), 1357-1365.
7. WIPO. (2014). *The Global Innovation Index*. WIPO. Retrieved March 6, 2025, from https://www.wipo.int/edocs/pubdocs/en/economics/gii/gii_2014.pdf
8. WIPO. (2024). *Global Innovation Index*. WIPO. Retrieved March 6, 2025, from https://www.wipo.int/web-publications/global-innovation-index-2024/assets/67729/2000%20Global%20Innovation%20Index%202024_WEB3lite.pdf
9. WIPO Global Innovation Index, W. G. (2025). *Global Innovation Index*. Retrieved March 6, 2025, from <https://www.wipo.int/en/web/global-innovation-index>
10. World.Bank.Group. (2026). *Fixed broadband subscriptions (per 100 people)*. Retrieved from data.worldbank.: <https://data.worldbank.org/indicator/IT.NET.BBND.P2>
11. World.Bank.Group. (2026). *Individuals using the Internet (% of population)*. Retrieved from data.worldbank.org: <https://data.worldbank.org/indicator/IT.NET.USER.ZS>
12. World.Bank.Group. (2026). *Mobile cellular subscriptions (per 100 people)*. Retrieved from data.worldbank: <https://data.worldbank.org/indicator/IT.CEL.SETS.P2>
13. أحمد عبدالله العوضي. (2010). العوامل المؤثرة في التسويق و التجارة الالكترونية. 6(1)، 163-189.
14. إضاءات. (2023). *التقنيات المالية في مجال الدفع الإلكتروني في قطاع التجزئة*. الكويت: معهد الدراسات المصرفية. تم الاسترداد من <https://kibs.edu.kw/wp-content/uploads/2023/08/August-2023.pdf>
15. الحاج العمري، و سامي بجنود. (2019). أثر البنية التحتية لتكنولوجيا المعلومات و الإتصال على النمو الاقتصادي: دراسة عينة من الدول العربية. *مجلة الإقتصاد و التنمية البشرية*، 10(2)، 598-613.
16. الحكومة الاتحادية. (2023). *مرسوم بقانون اتحادي في شأن التجارة من خلال وسائل التقنية الحديثة*. موقع الحكومة الاتحادية لدولة الإمارات العربية المتحدة.
17. أمجد صباح عبدالعالي، و هيثم عبد الله سلمان. (2013). أهمية التجارة الإلكترونية و معوقاتهما في إقتصاديات دول مجلس التعاون الخليجي. *مجلة الإقتصادي الخليجي* (23)، 4-50.
18. باسمه علي إحسان. (2012). *التجارة الإلكترونية مفهومها و مزاياها و موقع البلدان العربية منها*. مجلة كلية بغداد للعلوم الاقتصادية (32)، 209-222.
19. جمال قاسم حسن، و محمود عبد السلام. (2021). *التجارة الإلكترونية*. أبوظبي الإمارات العربية المتحدة: صندوق النقد العربي.

20. جمال قاسم محمود، و محمود عبد السلام. (2023). *دراسة حول إحصاءات التجارة الإلكترونية*. أبوظبي الإمارات العربية المتحدة: صندوق النقد العربي.
21. حسان طاهر شريف، محمد تقوروت، و طه حسان. (2020). *متطلبات نجاح التجارة الإلكترونية في الدول العربية*. مجلة الدراسات الاقتصادية و الأعمال المعاصرة، 3(3)، 111-133.
22. دانا القوقا، و آخرون. (2011). *الصعوبات التي تواجه التجارة الإلكترونية في فلسطين و أثرها على طريقة الاستخدام و تطبيقاتها*. رسالة ماجستير غير منشورة. نابلس، جامعة النجاح الوطنية، فلسطين.
23. رفعت عودة الله الشناق، و آخرون. (2019). *مقدمة إلى التجارة الإلكترونية*. عمان، الأردن: دار الفكر.
24. سرحان أحمد سليمان. (2024). *الوضع الراهن و المستقبلي للتجارة الإلكترونية عالميا و عربيا مع التركيز على الزراعة*. المجلة المصرية للإقتصاد الزراعي، 34(2)، 512-530.
25. علاوي محمد الحسن. (2015). *واقع استخدام تكنولوجيا المعلومات و الاتصال في الوطن العربي: دراسة تحليلية لبعض المؤشرات في الدول العربية*. مجلة أبعاد إقتصادية، 1(5)، 233-253.
26. علي خلف الركابي. (2010). *التجارة الإلكترونية و واقع استخدامها على المستوى العربي*. مجلة الإقتصاد الجديد(2)، 7-26.
27. فريد كورتل. (2011). *التجارة الإلكترونية في الوطن العربي..واقع سيبقى أم موجة ستنتهي؟* مجلة الإقتصاد الجديد(3)، 75-104.
28. كريم سالم حسين. (2014). *التجارة الإلكترونية العربية..الأفاق و التحديات*. الغري للعلوم الاقتصادية و الإدارية، 3(12)، 95-106.
29. محمد طرشي، و نبيل بوفليح. (2018). *التجارة الإلكترونية في الدول العربية بين الواقع و المأمول*. مجلة إقتصاديات شمال إفريقيا، 14(19)، 37-46.
30. محمد مجبر. (2006). *التجارة الإلكترونية و آفاق تطورها في الدول العربية*. رسالة ماجستير غير منشورة. جامعة سعد دحلب بالبلدية، الجزائر.
31. محمود مجدي بربري. (2023). *أثر الخدمات اللوجستية على الانفتاح التجاري في الدول العربية*. مجلة البحوث الإدارية، 41(3)، 1-22.
32. مريم مالكي. (2023). *أهمية التجارة الإلكترونية في تحسين مستويات التنمية المستدامة في الدول العربية*. مجلة الناقد للدراسات السياسية، 7(1)، 198-213.
33. مصطفى حجاج. (2013). *التجارة الإلكترونية*. مطبوعة بيداغوجية موجهة لطلبة السنة الأولى ماستر تخصص مالية و تجارة دولية. تيارت، جامعة ابن خلدون، الجزائر.
34. مليح يونس و العسولي عبد الصمد. (2020). *المنهج الوصفي التحليلي في مجال البحث العلمي*. مجلة المنارة للدراسات القانونية والادارية، 29(1)، 36-64.
35. نجلاء محمود المصيلحي. (2023). *الأبعاد الاجتماعية للتجارة الإلكترونية في مصر بين الفرص و التحديات: دراسة إجتماعية ميدانية على عينة من أصحاب صفحات التجارة الإلكترونية*. مجلة كلية الأدب في جامعة الفيوم، 15(1)، 844-912.
36. نعمة يحيوي، و مريم يوسف. (2017). *التجارة الإلكترونية و آثارها على اقتصاديات الأعمال العربية*. المجلة الجزائرية للتنمية الاقتصادية، 6(6)، 179-192.
37. ودان بوعبدالله، و إلياس مشيكل. (2019). *واقع و تحديات التجارة الإلكترونية في الدول العربية*. مجلة دفاتر بواذكس، 8(2)، 48-62.
38. وزارة التجارة السعودية. (2019). *موقع وزارة التجارة السعودية*
Retrieved from: <https://mc.gov.sa/ar/ECC/Pages/default.aspx>
39. وزارة العدل القطرية. (2010). *مرسوم بقانون رقم (16) لسنة 2010 بإصدار قانون المعاملات و التجارة الإلكترونية*. Retrieved from <https://almeezan.qa/LawView.aspx?opt&LawID=2678&language=ar>
40. وهيبه عبدالرحيم. (2012). *تقييم التجارة الإلكترونية و مدى إنتشارها عبر العالم*. مجلة الاجتهاد للدراسات القانونية و الاقتصادية، 1(1)، 229-248.