

The Reality of E-Commerce Development as One of the Most Important Activities of the Digital Economy: A Case Study of Arab Countries

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Abstract:

Over the past two decades, the volume of e-commerce has significantly expanded, reaching a total of approximately 30% of the global GDP. This growth has posed a major challenge for most governments around the world, especially in the Arab region, to keep pace with these developments and understand the surrounding environment, which, if adequately prepared, could elevate this important sector. Enhancing its components can serve as a catalyst for the development and spread of e-commerce across different segments of society. The digital infrastructure, particularly the growth in the use of information and communication technologies, forms the fundamental basis on which e-commerce platforms operate. This research paper discusses the reality of e-commerce in Arab countries in terms of requirements, activation mechanisms, and the challenges it faces. It draws on the latest statistics provided by the Arab Monetary Fund in the third quarter of 2024, which indicate increasing growth in the use of the internet, fixed and mobile broadband, particularly in e-commerce transactions, especially in the Gulf Cooperation Council countries, led by the United Arab Emirates.

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1. INTRODUCTION

E-commerce has witnessed widespread growth in recent times and has become one of the most important activities of the digital economy, particularly in the aftermath of the COVID-19 pandemic. It has started playing a prominent role in facilitating and executing large-scale transactions for the buying and selling of goods and services electronically on a global level, around the clock. This contributed to increasing the value of e-commerce transactions, reaching approximately 25 trillion US dollars in 2020, according to the United Nations Conference on Trade and Development (UNCTAD) statistics. Despite the vast size of global e-commerce activities, its volume in Arab countries represents only a small fraction, around one percent (1%), of the total global e-commerce, according to the latest data available from the Arab Monetary Fund for 2024. This necessitates expanding horizons for Arab business institutions and actively involving them in global value chains and digital economy activities. The current circumstances that the world, and particularly the Arab region, are experiencing require a reconsideration of the policies and strategies that must be followed to advance development. This change is no longer a choice that can be postponed or ignored but has become an imperative to confront the challenges arising from the recurrence of crises and disasters.

In this context, this research paper aims to explore the dimensions of e-commerce and the evolution of the Arab vision for the digital economy and e-commerce, based on the latest information and conclusions derived from international reports issued by leading global organizations in the fields of digital transformation and the digital economy for the year 2024. Accordingly,

The question of the study:

the main problem is posed in the form of the following question:

What is the current state of e-commerce in Arab countries? And what are the infrastructure components that enable the activation of e-commerce?

The importance of the study:

This study derives its significance from the pivotal role that e-commerce plays as one of the defining characteristics of the digital economy, which relies on infrastructure and technological advancement. Keeping pace with modern economic developments, integrating into the global economy, and opening up to international markets is a major challenge for Arab countries, which will strive to develop their technological infrastructure.

Methodology:

To address the problem raised, we adopted the descriptive-analytical approach by gathering quantitative data and reviewing tables and figures relevant to our research topic based on the latest available statistics for the current year, 2024.

2. Reasons for the Increase in E-commerce Usage at Present:

E-commerce has brought about a qualitative shift in commerce and has succeeded in changing global purchasing culture and buying behaviors. A number of factors have contributed to the increased global use of e-commerce, which could reach levels approaching 71% of online shoppers worldwide by 2022. These factors and reasons can be summarized as follows:

2.1 Ease of Internet Access Worldwide:

The global coverage rate for online commercial transactions increased from 66% in 2020 to 71% in 2022. The number of global internet users grew by 8.6% in 2019 compared to 2018, with internet users rising from approximately 56.8% of the world's population at the end of 2019 to around 64% in 2020, an increase of 13% largely due to the COVID-19 pandemic ([United Nations Conference on Trade and Development, 2022, p. 72](#)). Additionally, a survey conducted by the United Nations in 2021 and 2022 shows a noticeable increase in the percentage of individuals using the internet worldwide, from 67.81% in 2021 to 70.14% in 2022 ([United Nations, 2022, p. 45](#)).

The following table illustrates the percentage of internet users as a proportion of the global population.

Table 1. Percentage of Internet Users Worldwide

Regions	2010	2018	2019	2020	2021	2022
Arab countries	25.7	54.2	55.2	61.6	65.8	70.3
European Union	68.7	81.7	82.8	84.8	86.7	89.3
Latin America and the Caribbean	34.7	65.6	68.7	73.9	74.3	76.2
Low-income countries	3.4	16.3	17.9	19.5	22.5	26.4
Sub-Saharan Africa	6.1	24.7	26.2	29.3	35.3	39.7
East Asia and the Pacific	34.2	59.4	63.9	69.1	73.1	75.3
The world	28.8	49.2	53.6	59.6	67.8	70.1

Source: International Telecommunication Union Global Database for the year 2023.

2.2 Growth of Payments (Increase in Online Sales Value):

The annual growth rate of global e-commerce sales in 2022 compared to 2021 was approximately 11%, with e-commerce sales reaching around 5.424 billion US dollars in 2022

compared to 4.891 billion US dollars in 2021. This is illustrated in table (02).

Table 2. E-commerce Sales (2018-2024)

Year	Sales in Billion US Dollars
2018	2982
2019	3354
2020	4280
2021	4891
2022	5424
2023	5908
2024	6388

Source: Business Support Sector Observatory, *E-commerce in Saudi Arabia: Indicators and Figures*, 2024, p. 08.

2.3 COVID-19 Pandemic:

The world witnessed the spread of the coronavirus (COVID-19) at the beginning of 2020, primarily affecting the most developed countries. This led governments and institutions to adopt precautionary measures, limiting direct interactions and turning to remote work and e-commerce.

3. Stages of E-commerce Development and its Conceptual Framework:

E-commerce has its origins dating back five decades, passing through various stages since the early 1970s when computers began to be used in economic institutions. Its activities have significantly expanded during the first two decades of the 21st century. It experienced substantial growth in 2020 due to the full or partial lockdowns imposed by the COVID-19 pandemic. Numerous definitions of e-commerce have emerged. The United Nations Commission on International

Trade Law (UNCITRAL) defined e-commerce as "any commercial activity carried out through the exchange of information that is generated, stored, or transmitted via electronic exchanges through communication activities over open computer networks, such as the Internet" ([Open University of Al-Quds Forums, 2021, p. 08](#)). These exchanges can occur between individuals, businesses, households, governmental institutions, and various public and private entities ([Al Awadhi, 2010, p. 166](#)).

The World Trade Organization (WTO) defined e-commerce as the processes that enable the sale and purchase of goods and services over computer networks, using methods and means designed for this purpose, a definition that is widely accepted ([World Trade Organization, 2017, p. 191](#)).

There is often confusion between the terms "E-commerce" and "E-business," with the misconception that there is no difference between them. However, this is a common mistake, as e-business encompasses a broader scope than e-commerce. In addition to the marketing, selling, and purchasing of products and services online, e-business includes customer service, collaborative work with business partners, e-learning, and conducting operations within organizations electronically ([Al Thamer, 2008, p. 94](#)).

In this context, e-commerce has gone through three phases, summarized as follows ([Hassan & Abdul Salam, 2021, p. 10](#)):

- First Phase: Electronic Funds Transfer (EFT): This phase dates back to the early application of e-commerce in the early 1970s, marked by the emergence of electronic funds transfers between buyers and sellers, enabling the movement of funds

from one account to another instead of using traditional checks and cash collection procedures.

- Second Phase: Electronic Data Interchange (EDI): The emergence of electronic data interchange occurred at the end of the 1970s and continued until the beginning of 1982. E-commerce allowed the exchange of documents and data such as purchase orders and invoices electronically, linking major companies with their secondary suppliers or connecting parent companies with their branches. This development facilitated the involvement of companies in these activities, particularly financial institutions, factories, and retailers. Additionally, telecommunications applications such as buying and selling stocks in financial markets became prevalent.
- Third Phase: E-commerce: E-commerce benefited from the widespread use of the World Wide Web, and its applications were significantly developed starting in 1995. This phase saw the introduction of online advertising and auctions, to the extent that large and medium-sized companies established their websites on the global network. For example, General Motors has over 18,000 pages on its website and more than 98,000 links related to the company's products, services, and dealers.

4. Classifications of E-commerce:

E-commerce is classified based on the nature of transactions into several forms (Ihsan, 2012, pp. 9-10):

- Business-to-Business (B2B): This refers to transactions between companies, which constitute the majority of e-commerce dealings. It involves information systems and electronic market transactions

between businesses. This classification is common and is the most widely understood concept of e-commerce among internet users.

- Business-to-Consumer (B2C): This involves the sale of products and services from companies to consumers, resembling retail trade. The advent of the World Wide Web (WWW) has facilitated the growth and expansion of this category, making it a prevalent part of e-commerce applications.
- Consumer-to-Consumer (C2C): This refers to direct transactions between consumers via the World Wide Web. A consumer may post advertisements on their website to sell personal items or expertise. Examples include auctions hosted on internet platforms.
- Consumer-to-Business (C2B): In this model, individuals sell products or services to companies or institutions.
- Business-to-Administration (B2A): This type of activity covers all transactions between companies and government organizations or agencies. It is expected to grow significantly in the future as governments increasingly adopt e-commerce for their operations.
- Consumer-to-Administration (C2A): This category includes transactions between consumers and government entities, such as paying water and electricity bills through government or ministry websites.
- Government-to-Government (G2G): This type of e-commerce encompasses all commercial transactions and services between governments. It includes electronic commercial dealings, the exchange of information, and coordination between government agencies. For example, leasing data to government departments or exchanging data and information

between governments in different countries falls under this classification (Mrar & Al-Khalidi, 2020, p. 18).

- Government-to-Consumer (G2C): In this e-commerce model, information is exchanged between government agencies and consumers. It also includes the services that government agencies provide to citizens, such as educational, cultural, and medical services, as well as supplying specialized researchers with statistics and data. Additionally, it covers government job vacancy announcements (Mrar & Al-Khalidi, 2020, pp. 19-20).

5. Electronic Payment Options and Methods:

To complete a purchase, the buyer must use one of the trusted and widely accepted payment methods. The buyer is also required to choose the payment method they wish to use to finalize the purchase. Electronic payment refers to non-paper-based monetary transactions that have emerged in the banking sector, reducing the costs associated with paper transactions and labor. These methods are easy to use and less time-consuming compared to traditional payment methods. Additionally, they contribute to expanding e-commerce activities, supporting businesses, and facilitating entry into target markets with ease.

Electronic payment systems and options are generally divided into two types. The first type requires a third party or a trusted intermediary between the seller and buyer to complete the transaction, as in the case of traditional credit cards. The second type, however, does not involve a third party to complete the transaction, allowing direct transactions without intermediaries, such as the use of digital currencies.

Below are the main electronic payment methods (Hassan & Abdul Salam, 2021, pp. 19-20):

- Credit Cards: These are one of the most common methods of electronic payment, used to complete purchases over the internet or through designated electronic payment devices, without the need for physical currency. Credit cards are issued by specialized banking and financial companies and allow holders to make online purchases using a credit limit set by the issuing institution.
- Debit Cards: To obtain this type of card, an individual must have a bank account. Debit cards can be used for electronic payments, provided the holder has sufficient funds in their account to cover the transaction. The purchase amount is deducted directly from the account.
- Smart Cards: Similar to credit or debit cards, but equipped with a small, precise "processor chip" capable of storing all the customer's financial information. These cards are used to store funds, with the required amount deducted after each purchase transaction. Access to smart cards is protected by a personal identification number (PIN) given to each customer. Smart cards are secure as they store information in an encrypted format, offer faster data processing, and are cost-effective. Examples include VISA CASH and MONDEX smart cards.
- Digital Currency: Digital currency is used to settle the value of transactions over the internet, where funds are transferred from one entity to another without any intermediary. Digital currency transactions help complete these payments smoothly. Examples include cryptocurrencies like "Bitcoin."

- Electronic Funds Transfer (EFT): One of the most commonly used electronic payment methods, EFT transfers funds from one bank account to another, either within the same bank or between different banks. These transfers can also be made using automated teller machines (ATMs) or personal computers.

6. The Reality of E-commerce in Arab Countries:

Digital tools and skills are crucial for achieving success in transitioning to a digital economy and serve as key indicators for the implementation of e-commerce. In this section, we will explore the reality of e-commerce in Arab countries by examining the requirements for implementing and activating e-commerce, as well as the challenges it faces.

6.1 E-commerce Requirements in Arab Countries:

These refer to the mechanisms and indicators that facilitate the implementation of electronic commercial transactions. Among the most important are:

6.1.1 Indicators of the Shift Towards the Arab Digital Economy:

The digital economy relies on strategic dimensions and digital foundations necessary for a robust digital system that includes infrastructure, policies, regulations, digital skills, financing, and governance. These areas are essential for developing the digital system at international, regional, and local levels, as well as within institutions. Below, we outline the structure of the Arab Digital Economy Index for 2024, based on the latest statistics. This index is built on nine key pillars that align with the aforementioned five strategic dimensions. Each pillar

comprises three to eight indicators, totaling 43 indicators. These pillars include:

- Institutions;
- Infrastructure;
- Workforce;
- E-government;
- Innovation;
- Knowledge and Technology;
- Market Forces;
- Financial Market Growth;
- Sustainable Development.

Each pillar contributes to the overall index score (out of 100 points) for each country, determining the country's ranking, position, and status within the Arab region.

Additionally, for comparative purposes, Arab countries are benchmarked against two other countries: Singapore and Malaysia. The rationale for choosing these two countries lies in their successful digital transformation systems and broad international recognition, as well as their status as developing economies similar to Arab countries ([Arab Digital Economy Index, 2024, p. 838](#)).

The following table shows the ranking of Arab countries according to the Arab Digital Economy Index for 2024.

Table 3. Ranking of Arab Countries According to the Arab Digital Economy Index for 2024

Rank	Country	Index Value	Rank	Country	Index Value
1	UAE	75	12	Lebanon	44
2	Saudi Arabia	72	13	Mauritania	29
3	Qatar	66	14	Iraq	28
4	Bahrain	60	15	Comoros	24
5	Kuwait	60	16	Djibouti	24
6	Oman	59	17	Syria	24
7	Jordan	53	18	Libya	21
8	Tunisia	50	19	Sudan	21
9	Egypt	50	20	Yemen	21
10	Morocco	50	21	Somalia	20
11	Algeria	45	22	Palestine	17

Source: Arab Digital Economy Index Database 2024, p. 38.

The results of the 2024 index, as shown in the previous table, demonstrate the continued dominance of the Gulf Cooperation Council (GCC) countries, with scores ranging from 59 points for Oman to 75 points for the UAE, compared to the benchmark scores of 83 points for Singapore and 73 points for Malaysia. The UAE maintained its lead with a score of 75 points, and this group of countries continues to lead the index as the driving force behind digital growth. The second group, classified as "digitally active countries," includes Jordan, Morocco, Egypt, Algeria, and Lebanon, with scores ranging from 44 points for Lebanon to 53 points for Jordan.

The third group, termed "countries aspiring for development," includes Iraq, Syria, Djibouti, Mauritania, Sudan, Libya, the Comoros, Somalia, Yemen, and Palestine. This group achieved scores ranging from 17 points for Palestine to 29 points for Mauritania on the index scale.

The previous statistics and figures are supported by the results of key pillars, as follows:

Table 4. Results of Pillars for Arab Countries in 2024

Axes	Pillars	Average of Arab Countries	Variance Among Arab Countries
Digital Government	Pillar 1: Institutions	31	61
	Pillar 4: E-government	50.5	86
Digital Foundations	Pillar 2: Infrastructure	46.54	62
Citizen Digital Readiness	Pillar 3: Workforce	30.13	57.4
	Pillar 5: Innovation	22.31	50.7
Digital Innovation	Pillar 6: Technological Readiness	52.68	65
	Pillar 7: Market Evolution and Complexity	40.55	44
Digital Business	Pillar 8: Financial Market Development	26.36	76
Sustainable Development	Pillar 9: Sustainable Development Goals	57.31	59

Source: Arab Digital Economy Index Database 2024, p. 39.

Overall, the results from the previous two tables call on policymakers to review current strategies and adopt innovative measures to accelerate the digital transformation process and achieve sustainable development goals in Arab countries. The variation in performance across the Arab region reflects different levels of digital maturity and indicates varying strategic priorities and resource allocation for digital transformation efforts.

6.1.2 Infrastructure, Access, and Use of Information and Communication Technology (ICT):

The Arab region faces a significant challenge in ensuring that all Arab countries have access to strong fixed and mobile broadband infrastructure ([Arab Digital Economy Index, 2024, pp. 39-41](#)).

- **Mobile Broadband (Cellular Networks):** Statistics show that 70% of the Arab region currently uses 4G networks, 25% use 3G networks, and 5% have no access to either. The communication gap in the Arab region is most noticeable between urban and rural areas. According to the International Telecommunication Union (ITU), 100% of the population in urban areas of the Arab region has access to 4G or 3G networks. However, in rural areas, only 51% of the population has access to 4G networks, 35% have access to 3G networks, and 14% cannot access either network.
- **Fixed Broadband (Landlines):** Statistics indicate that only 9% of the Arab region has access to fixed broadband, compared to the global average of 17%. Thus, developed countries with widespread fixed broadband penetration are better positioned to benefit from ICT compared to developing countries. When fixed broadband infrastructure reaches an advanced level, it begins to have a significant impact on the economy and e-commerce transactions.

The following table illustrates the access to and usage of ICT by Arab countries.

Table 5. Infrastructure - Performance of Arab Countries for 2024

Rank	Country	Value	Rank	Country	Value
1	UAE	71.8	12	Lebanon	35.9
2	Qatar	65.5	13	Yemen	13.5
3	Saudi Arabia	57.6	14	Djibouti	12.8
4	Bahrain	57.4	15	Iraq	12.8
5	Oman	56.4	16	Libya	12.8
6	Kuwait	52.5	17	Mauritania	12.8
7	Algeria	42.3	18	Palestine	12.8
8	Morocco	41.7	19	Somalia	12.8
9	Egypt	39.3	20	Sudan	12.8
10	Tunisia	37.5	21	Syria	12.8
11	Jordan	36.5	22	Comoros	12.8

Source: Arab Digital Economy Index Database, 2024, p. 68.

It is important to note that the affordability of Information and Communication Technology (ICT) services poses a significant challenge for many Arab countries. Low-income countries face greater difficulties due to their gross national income levels compared to the cost of fixed and mobile broadband, which imposes additional constraints on internet access. As indicated in the previous table, the high-income Gulf countries lead the region in ICT development.

6.2 Challenges of E-commerce in Arab Countries:

E-commerce across the Arab world faces a number of obstacles that hinder its global expansion and development. Below are the key challenges:

- Weak technological infrastructure and the limited availability of both wired and wireless

telecommunications networks (Mazhoud & Mokadam, 2022, p. 07);

- Lack of availability and spread of electronic payment mechanisms;
- Internet speed and communication services remain insufficient for the requirements of e-commerce applications;
- Shortage of human skills and technical expertise in the field of ICT;
- Lack of and insufficient government support for the transition from traditional commerce to e-commerce, compounded by some Arab societies' reluctance to embrace external openness and lack of trust in electronic transactions;
- Language is a major challenge for e-commerce in Arab countries, as most e-commerce transactions are conducted in English;
- Absence of legal frameworks regulating e-commerce in some Arab countries;
- Weak oversight over electronic sales conducted via the internet;
- The method of integrating e-commerce statistics into the national accounting system.

7. CONCLUSION

Given the varying levels of economic development across the Arab region, high-income countries, particularly the Gulf states, should support less developed nations in their efforts to fully participate in the digital economy and promote e-commerce. This can be achieved through regional products and services that cater to the Arab region, such as joint ventures in telecommunications, trade, financial transactions, cybersecurity, and the establishment of joint companies, among others. This is known as regional cooperation and integration between Arab countries, presenting both an opportunity and a strategy to overcome the challenges the Arab region faces in advancing digital transformation.

7.1 Study Recommendations:

From the above, we propose the following recommendations, summarized in the following points:

- Expand and enhance the use of Information and Communication Technologies (ICT), ensuring widespread access to high-speed internet, and encouraging the adoption of digital technologies by companies and households to promote digital literacy and boost economic activities.
- Address gaps in digital payments by working to bridge disparities in the use of digital payments, supporting the growth of e-commerce both among individuals and between institutions, locally and internationally.
- Expand digital skills initiatives and workforce training, recommending joint programs between Arab countries to promote digital culture and vocational training.

- Establish a specialized fund to support digital innovation, as it is a key pillar of e-commerce, entrepreneurship, startups, and international partnerships.

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