COMCEC

IMPROVING E-COMMERCE CAPACITIES OF THE OIC MEMBER COUNTRIES

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This report has been commissioned by the Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation (COMCEC) Coordination Office to a team led by Assoc. Prof. Dr. Ali AYCI. The research team members and affiliations are; Assoc. Prof. Dr. Ali AYCI (Ankara Yıldırım Beyazıt University, Türkiye), Prof. Dr. Metehan TOLON (Ankara Hacı Bayram Veli University, Türkiye), Dr. Yenal ARSLAN (Ankara Yıldırım Beyazıt University, Türkiye), Dr. Esra Betül Kınacı (Gazi University, Türkiye), Assoc. Prof. Dr. Hilal AYCI (Gazi University, Türkiye), Dr. Doğuş YÜKSEL (OSTİM Technical University, Türkiye), Shivam TYAGI (Amazon, USA), Assoc. Prof. Dr. Muhammed EBUSHEHSS (Princess Sumeya University, Jordan). Assistants: Sibel DEMİRAĞ (Ankara Hacı Bayram Veli University, Türkiye) and Khalid Mohamed MURSAL (Ankara Yıldırım Beyazıt University, Türkiye).

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ADB	Asian Development Bank
AfCFTA	African Continental Free Trade Area
AI	Artificial Intelligence
ASAN	The State Agency for Public Services and Social Innovations
ASK	National Confederation of Entrepreneurs (Employers) Organizations of the Republic of Azerbaijan
ATAIC	Association of Tax Authorities of Islamic Countries
B2C	Business to Consumer
B2G	Business to Government
BDC	The Business Development Center
BSECO	Black Sea Economic Cooperation Organization
C2B	Consumer to Business
C2C	Consumer to Consumer
C2G	Consumer to Government
CBS	Central Bank of Somalia
CCP	The Competition Commission of Pakistan
CCPC	Consumer Protection Commission
CEPEX	Export Promotion Center
CIA	Central Intelligence Agency
CIAT	Inter-American Center of Tax Administration
CIT	The Corporate Income Taxes
COMCEC	The Standing Committee for Economic and Commercial Cooperation of the Organization of the Islamic Cooperation
COMESA	Eastern and Southern African Common Market
CSO	The Central Statistics Office
DBI	Digital Business Ireland
DoETE	Department of Enterprise, Trade and Employment
DTH	Digital Trade Hub

E-commerce	Electronic Commerce
eCAI	E-Commerce Association Ireland
EBRD	European Bank for Reconstruction and Development
ENISA	European Union Agency for Cybersecurity
EU	The European Union
FDI	Foreign direct investment
G2B	Government to Business
G2C	Government to Consumers
G2G	Government to Government
GCC	Gulf Cooperation Council
GDP	Gross domestic product
GDPR	European General Data Protection Regulation
GSMA	GSM Association
HDI	The Human Development Index
ICT	information and communication technologies
ILO	International Labor Organization
IMF	International Monetary Fund
IOTA	Intra-European Organization of Tax Administrations
ISP	Internet service provider
ITC	International Trade Centre
ITIC	International Tax and Investment Center
ITU	International Telecommunication Union
JEDCO	Jordan Enterprise Development Corporation
JISM	Jordan Institution for Standards and Metrology
KOBIA	SME Development Agency of the Republic of Azerbaijan
LPI	logistic performance index
MENA	Middle East and North Africa
MIT	The Ministry of Industry Trade and Supply

ML	Machine Learning
MoCI	The Ministry of Trade and Industry
MODEE	The Ministry of Digital Economy and Entrepreneurship
MODDT	The Ministry of Digital Development and Transport
MoITT	The Ministry of Information Technology and Telecommunication
MPTT	The Ministry of Post, Telecommunications and Technology
NSAI	The National Standards Authority of Ireland
OECD	Organization for Economic Co-operation and Development
OIC	*The* Organization of Islamic Cooperation
ONA	Tunisian National Office of Handicrafts
SESRIC	The Statistical, Economic and Social Research and Training Centre for Islamic Countries
SEVAD	National Federation of E-Commerce and Distance Selling
SME	Small and Medium Size Enterprises
SNBS	Somalia National Bureau of Statistics
SOMINVEST	The Investment Promotion Office
UNCTAD	United Nations Conference on Trade and Development
UNECE	The United Nations Economic Commission for Europe
UNDP	United Nations Development Program
UPU	Universal Postal Union
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
VR	Virtual Reality
WCO	The World Customs Organization
WEF	World Economic Forum
WTO	World Trade Organization

EXECUTIVE SUMMARY

Concept, Definition, Trends

With the development of the internet, the shift of marketplaces to virtual environments in addition to physical ones has necessitated a different perspective on commerce. The growth of cities, the increase in educated populations, demographic changes in lifestyle and workforce, and economic variables such as inflation and purchasing power affecting consumer behavior have led to the rapid development of e-commerce as an alternative form of trade. Especially with the pandemic affecting the whole world, the increase in the use of internet, social media and mobile devices has made e-commerce even more important for countries, businesses and consumers. There is no agreed definition of e-commerce and these definitions are changing daily with what technology offers. According to the OECD, e-commerce is a commercial transaction that takes place in open networks including both business-to-business and business-to-consumer. Hardware and software provision, intermediary services also expand the definition of e-commerce (OECD, 1997). Another e-commerce definition made by the WTO (2017) defines e-commerce as "production, distribution, marketing, sale or delivery of goods and services by electronic means".

Along with this typical B2C, there are nine basic types of e-commerce based on the nature of the Business transaction and the parties involved in e-commerce. The most prominent among these types are B2C and B2B e-commerce. For understanding e-commerce ecosystem UNCTAD has identified seven key areas in its e-commerce initiative; ICT infrastructure and service, payment solutions, trade logistics and trade facilitation, legal and regulatory frameworks, e-commerce skills development access to financing (UNCTAD, 2021a).

E-commerce is growing and developing process day by day. In 2021, retail e-commerce sales were approximately 5.2 trillion US dollars worldwide. It's forecasting to reach 8.1 trillion US dollars by 2026 (Chevalier, 2022). Brazil, Argentina and Türkiye are fastest-growing e-commerce markets globally, with over 14 percent growth. Except for Türkiye and Indonesia. In May 2022, the Türkiye-based platform Trendyol was the leading e-commerce website in the Middle East region, with over 101 million average monthly visits. Hepsiburada, also a Türkiye-based platform, was the second most visited, with around 68 million average monthly visits (Statista, 2022). Online advertising is an integral part of e-commerce (Fedorko, 2019). The country with the highest spending on digital advertising in MENA in 2021 was Saudi Arabia, followed by the UAE (Statista, 2023d).

However, the trade potential within the OIC countries has a potential for developing e-commerce between countries. The main actors of the foreign trade of the OIC Member States are Malaysia, Türkiye, United Arab Emirates, Indonesia, Saudi Arabia, Egypt, Iraq, Bangladesh, Nigeria, and Qatar, which accounted for about 72.17% of this trade in 2021. The major players in trade in services in the member states in 2020 were United Arab Emirates (122 billion USD), Saudi Arabia (64 billion USD), Türkiye (61 billion USD), Malaysia (55 billion USD), Qatar (54 billion USD), Indonesia (39 billion USD), Egypt (33 billion USD), Kuwait (26 billion USD), Nigeria (24 billion USD), and Morocco (21 billion USD) (COMCEC, 2022.)

On the one hand, countries develop their e-commerce infrastructures and capacities, this developing process is reflected in e-commerce figures, on the other hand, e-commerce applications reach very advanced dimensions with the developing technology. With the ever-increasing expectations and demands of consumers, businesses and administrations, constantly developing technologies have evolved into innovative applications in e-commerce. It is important to follow e-commerce trends in order to a gain competitive advantage. Some important current trends in e-commerce can be listed as follows; Social commerce in mobile commerce and e-commerce is constantly growing. While making transactions easier, informality increases. Personalization and local language service opportunities are increasing in e-commerce. Continuously developing technologies offer new opportunities in e-commerce. Blockchain-based technologies, Artificial Intelligence (AI) and Machine Learning (ML), Metaverse/Virtual Reality, 3 D Printing, mobile payments.

Desk Research and Field Visits

In this study, first of all, desk research was conducted for Ireland as examples of good practice and the Organization of Islamic Cooperation countries Azerbaijan, Jordan, Pakistan, Somalia and Tunisia. Then, field visits were made to Jordan and Azerbaijan.

One of Europe's best performing economies economically today, **Ireland** was one of Europe's most failing countries in 1987. Ireland made major investments in communications infrastructure in the early 1980s and implemented policies to support communications and trade infrastructure. Ireland is one of the most developed countries in terms of e-commerce ecosystem and ranked 8th out of 152 countries according to UNCTAD B2C e-commerce index, 2020, World report. Not only physical infrastructure investments, but also investments related to human resources, payment systems and the operation of international IT companies in the country were emphasized. Significant and effective support and incentives are provided for Startups and SMEs. E-commerce in Ireland is legally strong and constantly updated, and consumer rights are strongly protected in e-commerce. The association established by e-commerce companies (E-commerce Association Ireland) operates actively. Through this association, e-commerce companies can carry out lobbying activities and express their problems. One of the important elements of successful management is to measure, and it is very important to set up a data system to measure. Ireland has qualitative and quantitative data that cannot be compared with the countries covered by the survey, and these data are openly accessible. Ireland is a pretty good example in terms of e-commerce. However, the e-commerce sector is constantly changing with the changing and developing technology and needs, and the competition in global marketplaces is constantly increasing. Being able to adapt to this speed and manage is an important challenge for Ireland, like any other developed countries.

After desk research on Azerbaijan, a field visit was conducted for in-depth analysis. Azerbaijan's economy is driven by the oil and gas sector, which accounts for around 90% of the country's exports and fluctuations in oil prices have a significant impact on the national economy. This highlights the need for Azerbaijan to diversify its economy and reduce its dependence on oil. The revenue in the eCommerce market is projected to reach 1,8 billion US Dollars in 2023, and in the e-commerce market, the number of users is expected to amount to 3.96m users by 2027. General economic data on e-commerce in Azerbaijan is limited to transactions and volume. The informality of e-commerce companies is a very important problem and this problem creates a problem both in competition and taxation. Electronic payments are very scarce in Azerbaijan. The Government of Azerbaijan supports electronic payments for consumers, and consumers who make electronic payments receive back 17.5% of the VAT they paid. There are initiatives that will enable the development of e-commerce such as Azexport portal, Digital trade hub, e residency. Work continues to update the e-commerce law. However, e-commerce is considered as a sub-title of general commerce and there is no organizational structure that ensures the coordination of efforts related to e-commerce.

Jordan is the second country to have a field visit after desk research. Despite a challenging global environment, Jordan's growth rose to 2.7 percent in real GDP in the first half of 2022, supported by an increase in tourism, full economy opening and increased exports. Jordan is one of the most developed countries in the region in e-commerce and the Jordan e-commerce market is expected to reach a volume of US$ 4,494.5 million and a number of users of 4.81 million by 2027. Jordanian society prefers to pay in cash as they do not trust Digital payment despite the effects of the pandemic. Since there is no regulation for e-commerce in Jordan, there is no registered e-commerce business. The National E-commerce Strategy was approved on April 6, 2023 and the National task force consisting of different institutions/organizations related to e-commerce prepared the 2023-2025 action plan by taking the opinions of the relevant stakeholders. According to the action plan e-commerce legislation needs to be completed by the end of 2025 to cover all issues regarding e-commerce. The creation of a high authorized National task force is very important for the coordination. Preparations for planning and coordination for the development of e-commerce in Jordan have been completed, and implementation activities continue at full speed. With the enactment of e-commerce legislation, a new era will begin for Jordan.

Pakistan is another desk research country. Pakistan's economy witnessed a high growth rate of 6.1 percent in 2022, The World Bank has highlighted Pakistan's notable improvement regarding the ease of doing business, with the country effecting multiple reforms to speed up and streamline processes for obtaining construction permits, paying taxes online and registering property. One of the key strengths of Pakistan's economy lies in its young and vibrant population and Pakistan's strategic geographic location remains advantageous. As a gateway between South Asia, Central Asia, and the Middle East, the country has the potential to become a regional trade and transit hub. Pakistan's e-commerce market showed as a promising e-commerce market which likely to cross $7 billion in 2022 and $9 billion by 2025. Current business owners have expanded their business by selling their products and services online along with the physical selling, especially brands. The number of registered e-commerce business in Pakistan increased from 1,707 in 2019-20, to 3,003 in 2020-21 (76%). The year of 2019 is an important milestone in Pakistan's digital economy. Pakistan government is declared a policy framework for e-commerce with primary focus on; Regulatory and facilitation framework, financial inclusion and digitization through payment infrastructure development, empowerment of youth and SMEs through e-commerce, taxation issues, consumer protection in the digital environment, ICT sector and telecom services, logistics, data protection and investment and global connectivity and multilateral negotiations. A national e-commerce council has been constituted "as a single window for policy oversight to facilitate e-commerce players". The e-commerce consumer court in Pakistan is a specialized forum established to address disputes between consumers and e-commerce businesses. Pakistan's legal and regulatory framework for e-commerce is still in the process of development, and there are currently no specific laws governing the sale of goods and services over the internet. It is observed that the published strategy documents cannot be follow-up and monitored effectively.

Somalia is the 5th desk research country for this study. Somalia is the gateway to Africa for business and trade and this makes Somalia a dynamic place where east meets west. OIC countries are among the important commercial partners of Somalia. Despite various problems in the country, e-commerce has become an alternative for both consumers and service providers due to visionary entrepreneurs and young businessmen. As internet connectivity has grown better and more reliable, and mobile phone access and ownership has increased, the number of people in Somalia, both young and old who rely on e-commerce as opposed to traditional shopping has increased exponentially. Today, it is seen that there are about twenty e-commerce platforms. There is no institution directly related to e-commerce in Somalia, data on e-commerce, strategy document on e-commerce, etc. information and documents are not available. Providing data not only for e-commerce but also for traditional commerce is a very big problem for Somalia. The 9th National Development Plan of Somalia considers ICT a national priority in terms of sustainable economic growth, development of other industries and productivity gains. The ICT sector is one of the fastest growing sectors in the Somali economy. Costs are generally lower than in other East African countries, and Somalia's large international diaspora has contributed to the growth of the ICT sector. There is no national e-commerce strategy published directly for e-commerce. Somalia has important potentials for the development of e-commerce with its strategic location, long coastline, proximity to intercontinental ICT infrastructure. Legislative work on consumer protection in Somalia should be accelerated and put into practice. Competition should be regulated along with consumer protection. It is thought that it would be beneficial for the relevant institutions of the OIC countries to cooperate in establishing an active and sustainable Somalia data system.

Tunisia is the last country where desk research was conducted within the scope of this research report. According to the "E-commerce Index for 2020", Tunisia ranked 77th globally (70th in 2019 and 79th in 2018) and third place in Africa. Tunisia is the country with the highest internet spending in North Africa. Tunisia's transportation industry has been essential for the development of the nation's economy by utilizing its geographic location at the heart of the Mediterranean. The utilization of e-commerce in Tunisia has historically been limited due to underdeveloped e-payment and m-payment systems. However, the COVID-19 pandemic has prompted a significant surge in online transactions and the adoption of e-commerce by businesses. As of January 2020, only 6.6 percent of the population in Tunisia engage in online purchases or bill payments. National Federation of E-commerce and Distance Selling is a government agency that is responsible for developing and promoting e-commerce in Tunisia. One of the projects is the e-commerce Trust Label (LoC) project. It's created to promote online trade by assisting buyers and sellers on Tunisian e-commerce. The LoC is awarded to e-commerce websites that meet a set of criteria (Security, Reliability, Transparency, Consumer protection.) Tunisia National E-commerce Strategy 2021-2025 was developed by the Tunisian Ministry of Commerce and the Ministry of Communications and Information Technology. Increasing the penetration rate of e-commerce in Tunisia to 20% by 2025. The e-government initiative in Tunisia is still in its early stages but holds significant potential to impact businesses and e-commerce within the country. One of the key challenges facing e-commerce in Tunisia is the lack of adequate regulation. Currently, many e-commerce activities are conducted in an informal manner.

Surveys

In line with the purpose of the research, two separate questionnaires were created on the basis of the institutions and organizations of the relevant countries and the companies. Surveys were completed by 27 companies and 25 institutions/organizations from 25 OIC countries. Responses generally reveal that countries need to make some improvements in terms of developing their e-commerce infrastructure.

Organizations/institutions are in a position that the people in the country have the skills to use e-commerce. According to the results obtained, the participants can interpret that the e-commerce skills of the people in their countries are above a certain level, but there are still some deficiencies on the part of the rule makers. Participant companies are asked about their e-commerce focus. The most response has in the trade made directly to the customer (B2C) or to another company (B2B). The highest motivator for the ecommerce business is "Expanding sales to a wider geographic area". Companies see e-commerce as an element that increases their income more than the cost-reducing effect.

There is no problem with digital connection in my first target export country is scored at the highest level, while "My country has legislation on consumer protection measures such as spam restriction, right of withdrawal is the lowest". It is aimed to compare the average attitude scores of the electronic commerce infrastructures of the countries obtained from public institutions and firms. For the "Trade Logistic and Facilitation" factor, firms attributed a lower level of importance than public institutions. For other cases, there is no different attitude.

In another part of the survey, public institutions/organizations and companies were asked about their suggestions on the development of e-commerce for both their own countries and the OIC. Eight responses from public institutions and organizations for the development of countries in e-commerce. Three of these answers are that legal arrangements should be made, two are to raise public awareness and information, preparing a legislation on e-commerce and e-signature, develop digital and logistics infrastructure, develop internet and road infrastructure and to solve security problems for foreign investors to come to their countries. One of the participants stated that their country has made an improvement in e-commerce and continues to develop. There have been six responses from public institutions and organizations for the development of OIC countries in e-commerce. One of these responses is the provision of physical and legal infrastructure, two of which are the provision of support to vulnerable countries within the OIC, two of which are of sharing information directly or through a digital platform from countries experienced in e-commerce, and one of which is the organization of a campaign to raise public awareness.

Thirteen responses came from firms for the development of e-commerce for their countries. One of these responses suggested the establishment of a legal framework, the development of the internet and payment network, three of them aimed to inform and raise public awareness by developing a national strategy, two of them proposed to support companies operating in the field of ecommerce, and one of them proposed to ease the permitting processes. There have been ten responses from firms for the development of OIC countries in e-commerce. Two of these responses suggest to the establishment of a common payment platform, two of support for startups, one of increasing digital literacy, two of ensuring effective coordination at the OIC level, one of increasing the level of training of human resources, and two of the acquisition of new markets.

Recommendations

In this section, 10 standards have been created in 6 policy areas and 34 practices have been proposed. First of all, it would be useful to have a common definition/classification of e-commerce by COMCEC. . It is very important to create a data pool and to be able to collect and analyze data regularly. A portal that includes information and trainings on OIC countries will be useful for e-commerce companies in OIC countries. It is seen that some OIC countries have come a long way in e-commerce, while others are just at the beginning. Knowhow transfer will provide mutual benefits to countries. Establishment of an NGO in which e-commerce companies can act together and lobby can be pioneered.

OIC countries should effectively manage their e-commerce strategy, policy and programs. In this context, it is necessary to make multi-year programs, to create a taskforce with competent stakeholders, and to determine and monitor the coordination unit. E-government activities make significant contributions to the establishment of trust in consumers. In a significant part of the countries, cash is used instead of digital money, and the transition to digital money is necessary in terms of e-commerce and e-commerce monitoring. Supporting and encouraging companies that want to do e-commerce in terms of knowledge and practice is important for the future of the sector and should focus not only on B2C but also on B2B.

Legislation regarding e-commerce should be created with the broad participation of the society, should cover all parties and should be constantly updated. The ICT infrastructure required for e-commerce should be strengthened. This strengthening will accelerate not only e-commerce but also investments from abroad to countries that will make business life easier and safer.

Formalities should be reduced, appeal procedures, governance and impartiality should be improved. Logistics infrastructure should be developed for cheap, fast and safe delivery of goods. ICT user skills and practitioner skills should be increased. However, one of the most important factors is Branding and E-business skills should be developed. Different segments of society should be informed about e-commerce entrepreneurship and using electronic commerce. E-commerce will form an important and indispensable component of trade in the new period, and it is seen that the awareness of countries in this direction is quite high. Countries that have established a successful ecosystem in their own countries by developing their e-commerce infrastructure technically, legally and psychologically will provide significant gains to their people, businesses and geographies

1 INTRODUCTION

With the development of the internet, the shift of marketplaces to virtual environments in addition to physical ones has necessitated a different perspective on commerce. Economic and socio-cultural changes, particularly those affecting all national markets in our globalized world, have significant impact on trade along with technological advancements. The growth of cities, the increase in educated populations, demographic changes in lifestyle and workforce, and economic variables such as inflation and purchasing power affecting consumer behaviour have led to the rapid development of e-commerce as an alternative form of trade. Consumers want to shop in environments where they are offered the most effective and valuable propositions with their limited and precious time. This situation concerns not only individuals but also industrial market actors who have demands such as raw materials and semi-finished goods, etc., with the right timing, place, and decent quality. Over time, the increase in the use of the internet, social media, and mobile devices, especially with the pandemic affecting the entire world, has made the issue even more crucial for countries, businesses, and consumers who have not previously shopped in the virtual market. Therefore, it will be crucial for all countries to closely monitor the topics covered by e-commerce, make necessary legal regulations, and complete and constantly improve them by taking into account all elements related to technological infrastructure, thereby playing a role in enhancing their competitive advantages.

This study has been prepared as a guideline for the creation/development of an effective e-commerce environment in OIC Member Countries. The Guidebook basically consists of 4 chapters. In introduction section, after defining the definition and development process of e-commerce, the advantages and disadvantages of the different types of e-commerce that stand out today will be discussed. In the second part it will be the evaluation of the main environment in which e-commerce takes place, and international actors and exemplary initiatives within the e-commerce environment and then e-commerce trends are analyzed.

In the third part, researches on the development of e-commerce in OIC countries are carried out with desk research, field visit and survey methods. First, the e-commerce environment in Ireland, Azerbaijan, Jordan, Tunisia, Pakistan and Somalia will be analyzed by desk research method. Ireland, which was one of the economically weakest countries in Europe until recently, entered the world rankings with the keywords SME, IT and e-commerce, with its share from the world e-commerce and advanced e-commerce infrastructure (Technological, Technological, legal, commercial) selected as a best practice example. Other Desktop research countries were selected by evaluating the intensity of commercial activities, the status of e-commerce infrastructure, and the perspectives of country governments on e-commerce. In the second part of the research, field visits will be made to relevant public institutions/organizations, NGOs and businesses in Jordan and Azerbaijan. In these visits, exploratory analyses will be made on understanding the best practices in the country, identifying the barriers to e-commerce within and between countries, suggestions for removing these barriers, and policies for the development of e-commerce. In the third part of the research, two different target groups in the OIC countries will be surveyed. First of all, e-commerce businesses will be asked about their motivation, obstacles and expectations. The second target audience of the research will be the institutions and organizations that support/regulate the e-commerce infrastructure in the relevant countries. This group will be asked about the problems, motivations and expectations of e-commerce businesses in the country. In addition, they will be asked to make due diligence and make recommendations regarding the development of the e-commerce environment within the OIC countries. Thus, comparative analyses will be made between different actors. A data pool will be created from online platforms such as search engines and social media in finding e-commerce businesses and authorities. At the same time, the support of the COMCEC country representatives is very important in delivering the surveys to the relevant companies and authorities. In the fourth part of the study, the data obtained by desk research, field visits and survey method will be analyzed and standards and application recommendations will be made. In the fifth section, these standards and recommendations will be listed.

Definition and Development of E-commerce: There is no agreed definition of e-commerce and these definitions are changing daily with what technology offers. To understand the emphasis on different aspects of e-commerce, it is helpful to look at the definitions made by some critical organizations and authors. According to the OECD, e-commerce is a commercial transaction that takes place in open networks including both business-to-business and business-to-consumer. Hardware and software provision, intermediary services also expand the definition of e-commerce (OECD, 1997). Another e-commerce definition made by the WTO (2017) defines e-commerce as "production, distribution, marketing, sale or delivery of goods and services by electronic means". E-commerce transactions occur between businesses, individuals, government, households and other sectors and it offers people the opportunity to sell and buy goods and services. On the other hands, it also allows vendors to reach customers and sell in large quantities worldwide whether large or small business. Amazon also define e-commerce as buyers and sellers are connecting through electronic channels (Amazon, 2023). Electronic commerce carries out business transactions that comprise selling goods and services as well as information utilizing computer telecommunication networks. E-commerce is based on transactions between suppliers and their business customers which involves the exchange of orders or invoices.

Technological changes derive from different aspects of the e-commerce (Zwass, 2022). E-commerce technologies have unique characteristics for instance ubiquity which refers to the presence and availability of services or product anywhere and anytime. Global reach, universal standards, richness, information density, personalization, social technology and interactivity are also other characteristics of e-commerce (Laudon & Traver, 2015). To understand the emergence of e-commerce, it is necessary to look at the development of the web first. Because e-commerce occurs via the web, the Internet, which is the product of information and communication technologies, provide a new trading platform for business. Marketplaces change through technological devices such as smartphones, laptops that allow shopping everywhere, and cross-border e-commerce is formed this way. Since electronic commerce is basically a type of commerce that includes all the components of commerce, all issues in the field of commerce also concern electronic commerce. The development of technology accelerates the internet and the development of the internet accelerates the e-commerce processes. Does, the development process of e-commerce is, in a way, the development process of the Web.

Web 1.0 (1990-2000) period, is known as the first and most primitive period of the internet. Previously, users were presented with content that had already been created and they did not have the authority to add or comment on any content. The internet was used as an online library consisting of fixed content and one-way information flow (Badgers, 2021). The Web 1.0 era is the invention era of e-commerce (1995 and 2000). With the widespread use of the internet, e-commerce offered advantages such as fast access and market visibility. Furthermore, the internet has quickly given small business a competitive advantage while traditional companies remained slow and bureaucratic (Laudon & Traver, 2015).

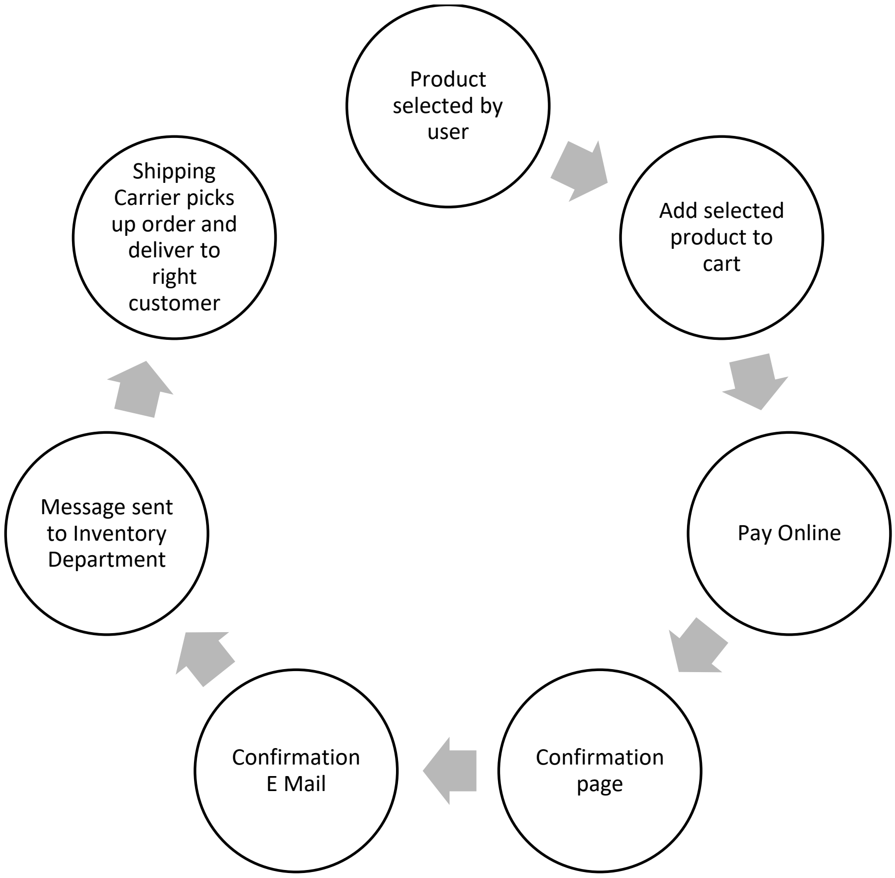
Web 2.0 (2000-2010) was the period during which the web became popular with its user-centered and collaborative environment. This era is also mentioned as dynamic and bidirectional. Since users could not only read websites but also interact and connect socially with other users. The emergence of technical services that cater to users' socialization needs has led to an era known as the "social web". It has features and functions in which social media comes to the fore, accessing information, organizing information and sharing information are prioritized. Facebook, Twitter, YouTube has emerged during this period (Badgers, 2021). Web 2.0 was the consolidation period of e commerce (2001-2006) and it was a sobering period especially for traditional businesses. Complex services like travel and finance, has stepped into the field, the widespread use of personal computers, and lower prices, have expanded access to the Internet. This has paved the way for targeted marketing (Laudon & Traver, 2015).

In the Web 3.0 period (2010-2020). An environment emerged where the control of the internet was out of the hands of people, and the data was structured and labelled in a way that can be read directly by computers. This period can also be defined as the semantic web due to the smarter web environment. This technology allowed us to use the collected data and enabled computers to make sense of it, offering personalized content, especially in the world of marketing and advertising. Databases created by looking at criteria such as previously visited places, shopping places, favorite pages offer users personalized ads based on their preferences and interests (Badgers, 2021).

Web 4.0 (2020-2030) is a period of web technology where real and virtual worlds are intertwined. At this point, the system has moved from the physical storage areas to cloud technology on virtual networks. This development has brought artificial intelligence and augmented reality technology to the fore. This period is also called the "symbiotic web" or "smart web" period. Because machines have reached the level of intelligence where they can interpret and make sense of the content on the internet. Through artificial intelligence algorithms that can think like humans, the relationship between the web and users appears to be more personalized. To efficiently use Web 4.0 technologies, a high-speed internet connection is required (Badgers, 2021). This is the Reinvention period (2007-…) of E trade, where technological tools have become the flagship of e-commerce. The invention of iPhone, online social networks, widespread adaption of mobile devices are the characteristic features which change the game (Laudon & Traver, 2015).

Types, Benefits and Challenges of E-commerce: A typical business-to-consumer e-commerce combines two different processes, the Target Cycle and the Transaction Cycle. The target Cycle is to make the target audience aware of the brand. includes the process of providing lucrative deals and registering on your website to start shopping. Transaction Cycle includes the process from the ordering of the customers to the delivery of the product to the customer (Figure 1.1). (Businessalligators,2023)

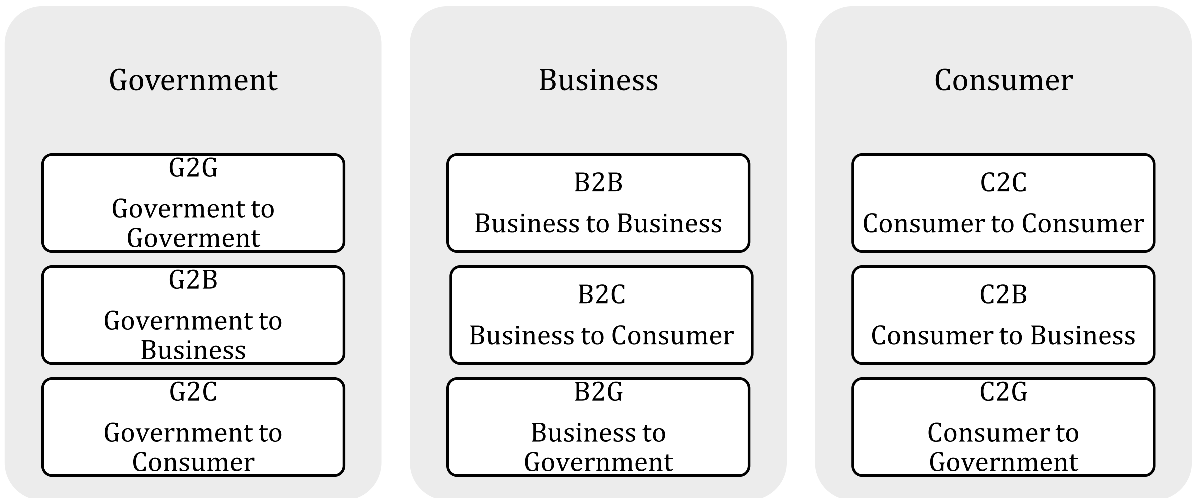
Figure 1-1 E-commerce Transaction



Source: Businessalligators,2023

There are nine basic types of e-commerce based on the nature of the Business transaction and the parties involved in e-commerce.

Figure 1-2 Types of E-commerce



Source: Triantafyllou, 2019; Turban et al., 2010.

Business to Business (B2B): Business transactions can occur between businesses and their supply chain, and the term business does not differentiate between for-profit and non-profit businesses. The basic characteristics of B2B is that businesses use automated trading or communication to improve their operations. Moreover, this type of trading can take place without Internet. B2B commerce experienced consolidation between 2000 and 2002 and continues to grow fast. B2B transactions have two types, stop buying and strategic sourcing. Spot buying refers the purchase of goods and services for immediate needs such as stock exchanges and commodity exchanges. The acquisition of strategic resources is based on long-term contracts and the company's familiarity between companies (Turban et al., 2010). According to the results of a study conducted by Mckinsey in the USA, the most effective tool in B2B is e-commerce. 32% of participating businesses state that they use e-commerce most effectively in B2B (Mckinsey, 2021). Amazon is the most well-known examples of B2B e-commerce platforms (Adobe Communication Team, 2022). This platform, businesses can come together and meet their own sales.

Business to Consumer (B2C): On one hand, companies offer their product and services to consumers who ultimately seek to benefit these offerings (Yıldırım, 2019). Online business attempt to communicate individual consumers. B2C transactions involve purchasing retail goods, travel services, online contents. This type of e-commerce has grown since 1995 and more customers can now participate (Laudon & Traver, 2015). Examples of B2C e-commerce include Virgin Atlantic Airlines, Facebook, Amazon, Walmart, Google, and Alibaba where business sell directly to consumers (Adobe Communication Team, 2022).

Business to Government (B2G): B2G is also known as B2A, a type of trade that takes place between companies and the government. This transaction occurs in government-related operations such as fiscal measures, social security and legal instruments. Acela, a software company, is one of the examples of B2G transaction. It provides software solutions to governments about their actions (Javed, 2022). Business transactions to government is a type of e-commerce which includes government agencies. Paying taxes and filling out required reports are examples of these transactions. CAL-Buy is the State of California's B2G model that allow businesses to sell goods and services to government. Some sources consider B2G transactions as part of B2C e-commerce type (Schneider, 2007).

Consumer to Business (C2B): The consumer to business C2B is the sale of goods and services by individuals using the Internet to bid on organizations or individuals (Turban et al., 2010). In this e-commerce model, consumers provide value-creating suggestions for businesses. For example, when a consumer writes a review for any product of the business or develops suggestions on how a product can be improved, value is created if it becomes a competitive force for the business. An IT freelancer is an example of C2B e-commerce (Adobe Communication Team, 2022). IT freelancers sell their services as consumers to businesses which request them.

Consumer to Consumer (C2C): This kind of trade includes transactions where all transactions take place between individuals, sometimes involving third parties such as eBay or social network sites. Consumers try to reach other consumers to sell their products. Intermediaries help consumers to communicate with each other to buy or sell different items. Social networks are also a new trend for C2C activities (Turban et al., 2010). C2C transactions which occur between individuals, can involve the sale of second hand products. Second-hand products finally reach individual buyers and sellers (Yıldırım, 2019). eBay and Facebook marketplace are well known places where consumers get together to sell their products to others. eBay and Facebook are also two of the most famous examples of C2C e-commerce (Adobe Communication Team, 2022).

Consumer to Government (C2G): C2A in other words C2G, deals with business relations between individuals and government via the Internet. C2G helps the public communicate with the government. Consumers can request information about security, taxes or payment of health services (Javed, 2022). As an example, homeowners in Türkiye can submit their rental income statements via the electronic portal of tax office.

Government to Business (G2B): Government aims to automate government interactions with businesses, which can take the form of both government-to-business and business-to-government transactions. Government-to-business e commerce involves the government selling goods to businesses and providing services to them (Turban et al., 2010). Examples of this e commerce model include online information and consultancy services, government contracting, digital supply markets, regulatory updates, electronic auctions, tax and social security payments and reporting, electronic forms, online application submission functions, and virtual business dispute resolutions.

Government to Consumers (G2C): This type of e-commerce kind involves the government conducting all transactions with citizens online, often through regional websites and platforms, to have their citizens make payments or access information. Examples of G2C include educational and employment services and voting (Adobe Communication Team, 2022). Norfolk County

Council is an example of G2C e-commerce. This organization provides online services to its citizens in the fields of education, business and health (Adobe Communication Team, 2022).

Government to Government (G2G): Government-to-government (G2G) e-commerce involves transactions between different government units, often with in the same governmental body, to increase efficiency and effectiveness. One example of G2G e-commerce is the Federal Case Registry (Turban et al., 2010). Alibaba Group founded in 1999 as an online B2B wholesaler, has been China's irrefutable e-commerce king over the past two decades. The company's tech empire stretches across B2B, B2C, and C2C e-commerce, cloud computing, local service, logistics, and financial services. In 2020, Alibaba's online retail properties took up a quarter of the global e-commerce market, nearly doubling the market share that Amazon had. However, challenged by China's ever-strengthening anti-monopoly law and competition from the rising social commerce companies, Alibaba has shown signs of losing its throne. As of 2022, Alibaba's market value vanished to 237.8 billion U.S. dollars, nearly 75 percent less than its peak (Ma, 2022).

Benefits of E-commerce: There are many benefits that e-commerce offers for both businesses and consumers. These include (Martin Ferreira, 2019; Yıldırım, 2019; Schneider, 2007; Rayport & Jaworski, 2015);

- Monitoring and controlling electronic payments in e-commerce can increase social welfare and contribute to environmental savings by promoting distance education, reducing pollution and traffic.

- E-commerce saves time and allows many buyers and sellers to participate in the trading process simultaneously, providing opportunities for group interactions

- E-commerce offers uninterrupted shopping as it is independent of location, enabling businesses to reach many customers geographically dispersed to sell their products.

- E-commerce allows entrepreneurs to start by themselves and then grow their teams. It offers relatively easy trading opportunities for groups such as women, low capital owners, and youth.

- Businesses are attracted to e-commerce platforms due to their simplicity and the potential for rapidly increasing profits. The main advantages are increased sales and reduced costs. E-commerce provides competitive strategies for technology-oriented companies, who could not compete traditionally otherwise. E-commerce can also offer customers a wide range of products 24 hours a day.

- Digital products allow customers to save time, gather information, and compare product prices. Real-time competitive responsiveness and speed of decision-making are changing the competitive landscape, enabling consumers to access more affordable products. While consumers collect information and compare the prices and features of products, businesses can quickly and effectively monitor their behaviours.

Challenges of E-commerce: Besides many advantages, it is also necessary to mention some challenges of e-commerce. These include (Dikkaya & Aytekin, 2018; Yıldırım, 2019; Schneider, 2007; Deliçay, 2021):

- There is the danger of monopolizing tendencies. The fact that large e-marketplaces spread to complementary areas and rise to an advantageous position in these areas can reduce the competitiveness of their competitors and deter potential competitors who may enter the market.

- The fact that some applications of large companies restrict consumers and sellers from switching to other e-marketplaces can make it difficult for competitors to become stronger. With the effect of such factors, one or more e-marketplaces in many countries have gained a significant market share in retail e-commerce.

- Certain companies may rely heavily on specific e-marketplaces to conduct their business. In such cases, the e-marketplace operators may have the power to impose unfavorable terms on sellers with little bargaining power.

- Along with the ever-growing and developing retail e-commerce, a decline in traditional trade, a decrease in tax collection, disruptions in market surveillance and control, and some problems in consumer protection have begun to emerge.

- Lack of e-commerce awareness makes it difficult for companies to reach customers and for customers to connect with companies and other parties. A common criticism of e-commerce is the lack of audit on distributed information, making it difficult to control and protect information over the internet. Spreading and playing information has no auditing actions, so theft of information can occur. Technology has changed dramatically, so costs that are a function of technology cannot be tracked in short-lived e-commerce projects. Cultural and legal affairs affect businesses. Some customers have concerns about online shopping and using their credit card numbers. Cultural disadvantages should be regulated by governments to make individuals feel more comfortable.

While utilizing the advantages mentioned above to gain a competitive advantage, countries and businesses should also develop appropriate policies to eliminate or minimize the disadvantages. Being aware of these disadvantages is not a reason to avoid developing e-commerce. Instead, it is essential for the development of e-commerce to minimize these disadvantages.

2 BASIC DETERMINANTS AND TRENDS OF E-COMMERCE ENVIRONMENT

The e-commerce ecosystem requires many different actors and determinants to work together in the most appropriate and integrated way. Increasing expectations of consumers and increasing global competition make it necessary to analyze these variables and develop appropriate strategies in line with the analysis. In a macro environment, an e-commerce system covers data governance (including the free flow of data with trust and open government data), e-trade facilitation (including paperless trading, single windows, electronic contracts, electronic authentication and electronic signatures, electronic invoicing), consumer trust (including online consumer protection and safety), and business trust (including open internet access, cybersecurity, and protection of source code and cryptography-related technology) (European Commission, 2023a). UNCTAD has identified seven key areas in its e-commerce initiative, which are e-commerce readiness assessment, ICT infrastructure and service, payment solutions, trade logistics and trade facilitation, legal and regulatory frameworks, e-commerce skills development access to financing (UNCTAD, 2021a). According to the World Bank, the digital economy framework is related to seven areas, which are digital infrastructure, digital skills, digital platforms, digital financial services, digital business, and trust environment (World Bank, 2023a). Below, the factors affecting the e-commerce ecosystem are grouped together with some macro variables.

2.1 Economic and Financial Environment

Economic and financial environment can be classified as international and national level

International Level: One of the most important determinants of international e-commerce is global economic developments. The global economy is being influenced by various factors, the most important of which are information and communication technologies. The digitalization of economies significantly increases their competitiveness in the international market and fundamentally changes business processes in the international business environment. Countries that are actively developing and implementing information and communication technologies, as well as investing in this process, have faster-growing economies. The Eurozone and the areas of the United States, Latin America, and the Caribbean are suffering immensely. Other regions, including Sub-Saharan Africa, the Middle East, Central Asia, and emerging and developing Asia, are less affected, but growth is anticipated to be more assertive in these nations (IMF, 2022). The global growth rate will decline from 3.4% in 2022 to 2.9% in 2023 before rising to 3.1% in 2024 (IMF, 2022). Between 2020 and 2022, despite the negative impact of the pandemic, OIC Member states experienced an increase in their GDP of approximately four trillion US dollars, from 19.4 trillion USD in 2020 to 23.6 trillion USD in 2022, representing a 21.7% increase. The main actors of the foreign trade of the OIC Member States are Malaysia, Türkiye, United Arab Emirates, Indonesia, Saudi Arabia, Egypt, Iraq, Bangladesh, Nigeria, and Qatar, which accounted for about 72.17% of this trade in 2021 (COMCEC, 2022).

The global COVID-19 pandemic has had a significant negative impact on economies. Trade was severely disrupted, social security systems became strained, consumption and investment fell, and governments had to intervene to support the liquidity of households and businesses (OECD, 2021). The COVID-19 pandemic has impacted intra-OIC trade between 2019 and 2020 with a decrease of 21%. However, this reduction turned into an increase of 6.8% from USD 700.87 billion in 2019 to USD 748.34 billion in 2021 (COMCEC, 2022). From 2000 to 2020, total intra-OIC trade expanded from USD 130 billion to USD 585 billion. Moreover, the percentage of trade inside the OIC increased from 13.0% in 2000 to 18.9% in 2020, an increase of 5.9 percentage points (SESRIC, 2020). The share of the OIC countries group in global inward foreign direct investment (FDI) flows increased from 0.9% (2000) to 7.2% (2019). Regarding inward FDI stocks, the group of OIC countries increased its share in the world total from 3.4% in 2000 to 5.6% in 2019. Despite the increase, the gap between non-OIC developing countries and OIC countries groups similarly increased from 11 percentage points (2000) to 19 percentage points (2019). The projected value of Sharia-compliant financial assets, which include capital markets, money markets, insurance, and non-bank financial institutions, is over US$2 trillion (World Bank, 2023b). The value of assets hosted by the top-10 performer OIC countries represented a share of 94.1% in the global Islamic financial assets in 2019 (SESRIC, 2020). The OIC group of countries has increased its total external debt stock by 3.3 times in the last two decades, and the total external debt stock of the OIC group of countries was 1.9 Trillion US dollars in 2020 (SESRIC, 2020).

National Level: Businesses seek stable, expanding markets where their revenues are unaffected by currency changes and inflation. Many economic elements, including the cost of capital, levels of economic growth, inflation rates, and foreign exchange rates, are influenced by government actions. The monetary and exchange policies implemented by a government will influence the stability of its currency, which is essential for any company conducting business abroad. The types of taxes imposed by a government will determine the competitiveness of a specific type of business inside a country. Although a government can contribute to a prosperous economy and easy access to capital, a range of other factors influences the political environment of a country (StudySmarter, 2020). The phrase economic environment refers to any external economic elements that influence consumer and business purchasing behaviours and, consequently, affect the performance of a company. These elements are typically out of a company's control and might be enormous or small in magnitude. While businesses cannot always control their economic environment, they can evaluate it before entering a certain market or industry or pursuing other tactics (BDC, 2021).

Table 2-1 Economic Environment

Macro factors	Micro factors
Employment/unemployment	The size of the available market
Income	Demand for the company’s products or services
Inflation	Competition
Interest rates	Availability and quality of suppliers
Tax rates	The reliability of the company’s distribution chain (i.e., how it gets products to customers)
Currency exchange rate	
Saving rates	
Consumer confidence levels	
Recessions	

Source: BDC, 2021.

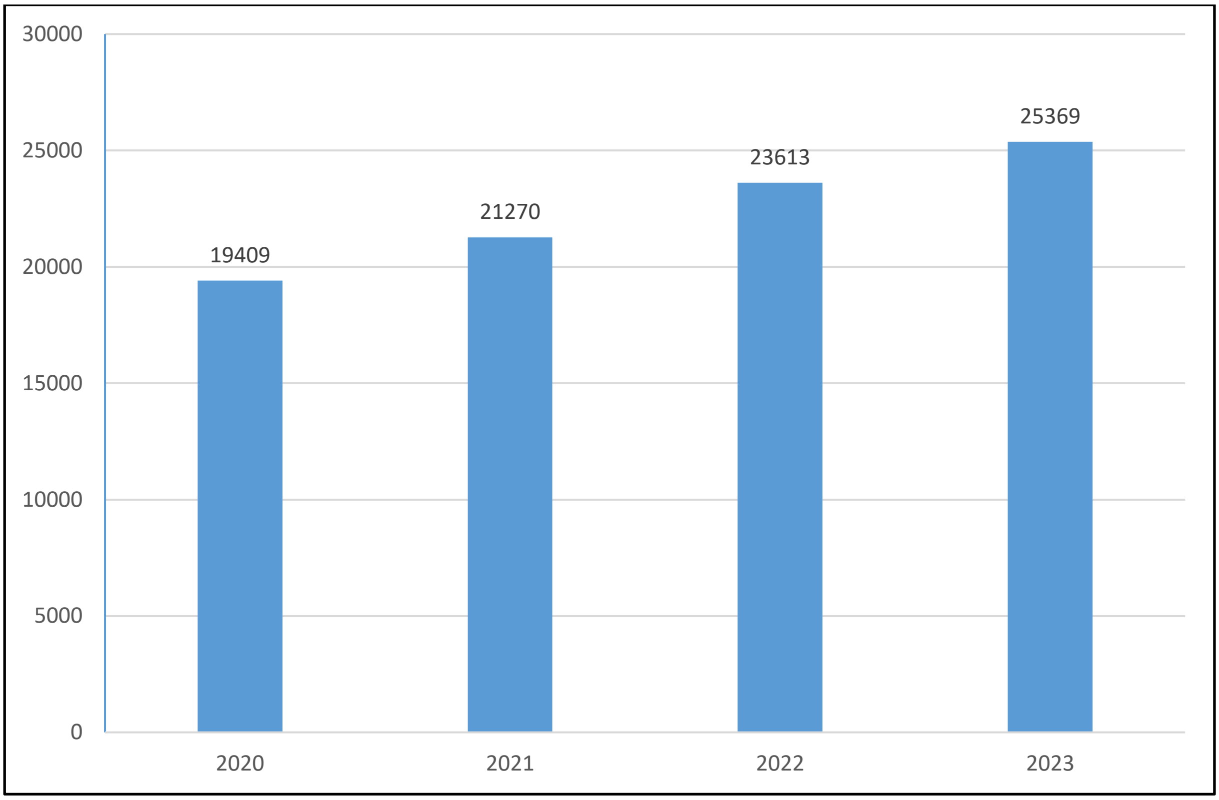
GDP is the monetary value of final goods and services produced in a country in a given period of time and counts all outputs produced within a country's borders. Because GDP provides information about the size of the economy and how an economy is performing, the growth rate of real GDP is often used as an indicator of the overall health of the economy (Callen, 2023). It is seen that the share of trade in GDP is high in developed countries (World Bank, 2023c).

Table 2-2 Latest World Economic Outlook Growth Projections (Real GDP, Annual Percentage Change)

	2022 Estimate	2023 Projections	2024 Projections
World Output + A1 A2	3,1	2,9	3,1
Advanced Economies	2,7	1,2	1,4
United States	2	1,4	1
Euro Area	3,5	0,7	1,6
Germany	1,9	0,1	1,4
France	2,6	0,7	1,6
Italy	3,9	0,6	0,9
Spain	5,2	1,1	2,4
Japan	1,4	1,8	0,9
United Kingdom	4,1	-0,6	0,9
Canada	3,5	1,5	1,5
Other Advanced Economies	2,8	2	2,4
Emerging Market and Developing Countries	3,9	4	4,2
Emerging and Developing Asia	4,3	5,3	5,2
China	3	5,2	4,5
India	6,8	6,1	6,8
Emerging and Developing Europe	0,7	1,5	2,6
Russia	-2,2	3	2,1
Latin America and the Caribbean	3,9	1,8	2,1
Brazil	3,1	1,2	1,5
Mexico	3,1	1,7	1,6
Middle East and Central Asia	5,3	3,2	3,7
Saudi Arabia	8,7	2,6	3,4
Sub-Sahaa-ran Africa	3,8	3,8	4,1
Nigeria	3	3,2	2,9
South Africa	2,6	1,2	1,3
Memorandum Emerging Market	3,8	4	4,1
Low Income Develoing Countries	4,9	4,9	5,6

Source: IMF, 2023a.

Figure 2-1 GDP Evolution of OIC Countries (Billions USD)



Sources: COMCEC, 2022.

Between 2020 and 2022, OIC Member States experienced an increase in their GDP by approximately four trillion international USD despite the negative impact of the pandemic. The GDP increased from 19.4 trillion international USD in 2020 to 23.6 trillion international USD in 2022, an increase of 21.7%, which could reach 25.4 trillion international USD in 2023 (COMCEC, 2022).

When examined in terms of e-commerce businesses, access to finance and payment solutions are included in the economic environment. Digital Financial Services provide the ability to pay, save, borrow, and invest through digital means and support financial inclusion by removing geographic and market barriers. Digital payments are often the entry point for digital financial services and provide the infrastructure for additional products and use-cases can be developed. A digital financial services ecosystem requires forward-looking and proportionate legal and regulatory frameworks allowing market entry and innovation, robust financial infrastructures supporting fast and interoperable payment infrastructures, and development and deployment of low-cost delivery channels through agents, point-of-sale devices and mobile phones (World Bank, 2023a).

2.2 Political and Legal Environment

A country's political and legal environment has a strong influence on the competitiveness of that country's private sector. Building a common understanding of the legal environment for business is a controversial endeavor due to its multidimensional nature (OECD, 2021). This environment includes all the governmental institutions, political parties, and organizations that are manifestations of the people of the world's nations, as well as all the rules, regulations, and laws. The political and legal environment can be studied mainly on political stability, taxation, and regulations (Maiello, 2022). The legal and regulatory environment can be a facilitating or hindering factor for e-commerce. It can create direct barriers to e-commerce and hinder the development of the necessary enabling environment. Providing a supportive legal and regulatory environment, avoiding restrictions, and providing primary regulatory conditions for e-commerce entrepreneurs require a coordinated effort across domains (OECD/WTO, 2017). Instead, the regulation of digital markets is a patchwork of regulatory solutions from different policy areas. The regulation of e-trade entails elements of contract law, in particular regarding electronic documentation and signatures, financial law in what relates to e-payments, consumer protection, intellectual property, cybersecurity, personal privacy, and data protection (Jaller, et. al, 2020).

Regulating remote electronic transactions: The legal recognition of electronic documents and signatures in remote transactions and the regulation of relations is essential for an advanced e-commerce system, especially business-to-business e-commerce. Three commonly accepted principles for electronic documents are non-discrimination, functional equivalence, and technological neutrality. In electronic commerce, the ability of parties to conclude legally binding contracts remotely is a central feature of global commerce. The electronic signature complements this digital proximity by providing a mechanism for full legal recognition of any agreement that can be made even remotely (Jaller, et. al, 2020).

Trust-building regulation: Regulations significantly support digital markets by promoting trust. The most important reason not to shop online, even in developed markets, is the lack of trust in remote electronic transactions. Consumer protection, intermediary liability, privacy, data protection, and cybersecurity regulations play an essential role in increasing trust in digital markets (Jaller, et. al, 2020).

Consumer protection: Basic guiding principles for online consumer protection are recognized in two major international law instruments. The first one is the UNCTAD Principles on Consumer Protection of 1985 (revised in 1999 and updated in 2015), which contains recommendations to protect online consumers and improve transparency in online transactions. Second, in 2016, the

OECD revised its 1998 Consumer Protection Recommendation for e-commerce, modernizing its approach to fair business practices, information disclosures, payment protections, unsafe products, dispute resolution, enforcement, and education. The stages of consumer protection regulation cover three stages, which are pre-purchase, during-purchase, and post-purchase (Jaller, et. al, 2020).

Intermediary liability: Since e-commerce platforms such as Alibaba, eBay, and Trendyol rely on offering products to consumers from thousands of different providers rather than their own stocks, the relationships between the intermediary (websites and applications) and the companies and individuals that offer their own products or services are vital for the functioning of digital transactions. Agent liability rules govern the relationships between agents (websites and apps) and actual vendors or content developers in case of problems (Jaller, et. al, 2020).

Privacy and data protection: Consumers' lack of confidence in the way their personal data is managed limits the growth of digital markets, and burdensome regulations regarding the use and transfer of individual data can create significantly high costs, especially for SMEs. Data privacy considerations include authorizing all or certain types of persons (also called data subjects) to collect, use, store, and destroy their personal data (Jaller, et. al, 2020).

Cybersecurity: Cybersecurity regulation is an essential component in building trust in digital markets. Major data breaches, such as Yahoo's incident in 2013, which affected 3 billion user accounts, have a chilling effect on digital markets (Jaller, et. al, 2020).

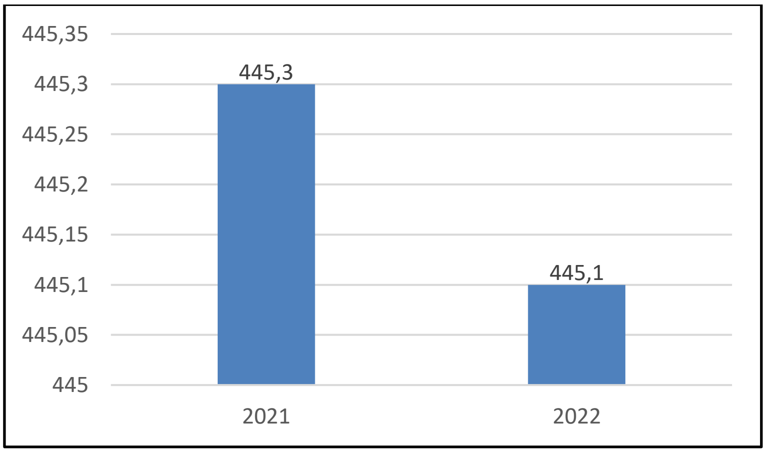
Regulatory restrictions to digital trade: Regulations are not always made to support digital commerce, and in some cases, they may impose limitations that may hinder digital commerce. Restrictions on digital commerce may aim to protect public policy objectives, children, public health, and individual privacy. The most common restrictions to digital trade are the ban on online sales and regulations on cross-border data flows (Jaller, et. al, 2020).

Bilateral and regional agreements, and international treaties are also regarded among the main factors to be analyzed in the context of Political and Legal Environment

2.3 Digital Skills, Employment, and Entrepreneurship

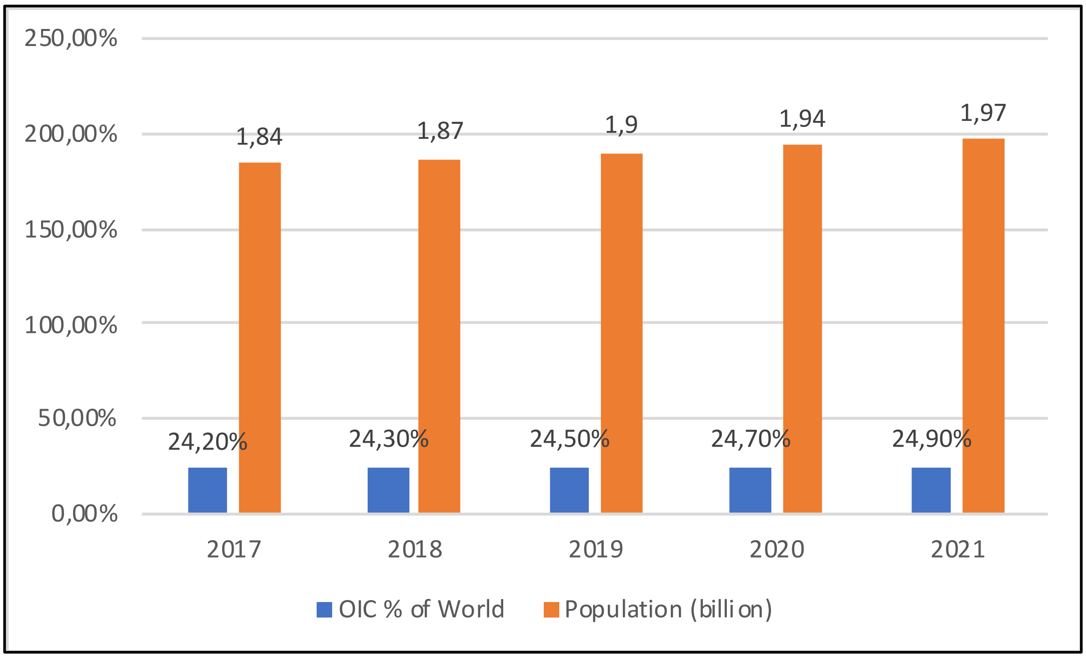
In 2004, the European e-Skills Forum adopted a definition of the term "e-skills" covering three main categories, which are ICT user skills, ICT practitioner skills, and e-business skills (European Commission, 2005). ICT user skills represent the abilities individuals need to effectively implement ICT systems and devices. User skills include using common software tools and specialized tools that support business functions in the industry. Generally, they cover the skills necessary for the safe and critical use of ICT for work, leisure, learning, and communication. ICT practitioner skills are the abilities needed to do research, create, design, strategically plan, manage, produce, consult, market, sell, integrate, establish, manage, maintain, support, and service ICT systems and e-business skills are the competencies required to take advantage of the opportunities offered by ICT, especially the internet, to launch new initiatives, enhance company performance, and explore new business, administrative, and organizational processes (EuropeanComission, 2010). Participants in e-commerce should be skilled in digital literacy and business growth, as well as in the basic reading, writing, and math abilities necessary for the digital business environment. For the most efficient e-commerce involvement, all of these digital skill tiers are required. Modern education programs need to be broadened to incorporate the development of skills and entrepreneurship for digital marketplaces if nations are to gain from e-commerce (OECD/WTO, 2017). The European Commission recommends that countries commit themselves to developing long-term national e-skills strategies (European Commission, 2010). While developing strategies for the development of e-skills and e-skill-based entrepreneurship, factors such as age, education level, and a number of researchers come to the fore. The size of the young population is a significant advantage for the e-commerce ecosystem, as younger people tend to be more digital-savvy. Reports show that the major strengths of the group of OIC countries include a high share of the young population. Reports show that the group of OIC countries, which makes up 24.5% of the world's population in 2021 with 1.9 billion people, has a high proportion of young people (0-24 years), representing 51.3% of their total population and it is the highest ratio when compared to non-OIC developing and developed country groups (SESRIC, 2020). While the population in European countries where e-commerce is widespread is decreasing, it is seen that the population increase follows an increasing trend when looking at the OIC countries (Figure 2-2, 2-3)

Figure 2-2 EU-27 Population(Millions)



Source: Eurocommerce 2022.

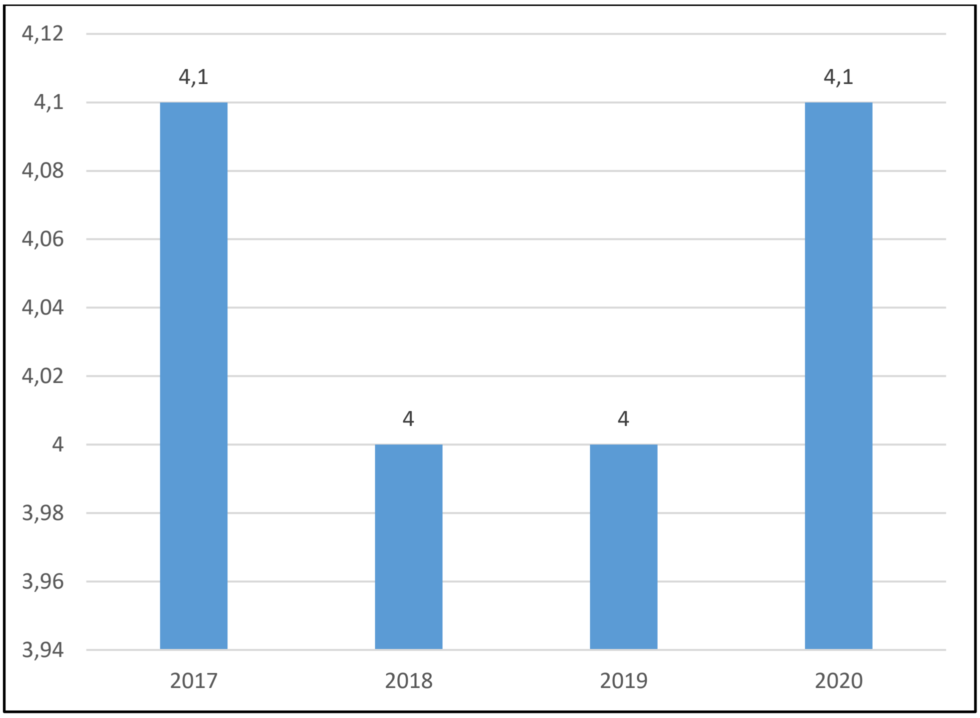
Figure 2-3 The Population of OIC Countries



Source: SESRIC, 2022.

The Human Development Index (HDI) is prepared by including variables of life expectancy, education, and per capita income in countries worldwide. In 2019, the average HDI value of the group of OIC countries (0.659) remained below non-OIC developing countries (0.711), the world's (0.737), and developed countries (0.925). This difference is getting bigger as time goes on. The HDI gap between non-OIC developing countries and groups of OIC countries increased from 0.033 points in 2000 to 0.052 points in 2019 (SESRIC, 2020). The average Gross Enrolment Ratio (GER) in tertiary schools was only 28.4% in the group of OIC countries, lower than that of the non-OIC developing countries (39.1%), the world (40.6%) and developed countries (80.7%). According to 2018 data, the group of OIC countries lags behind the world with an average of 512 researchers per million people, compared to 1,235 researchers for non-OIC developing countries and 4,705 researchers for developed countries (SESRIC, 2020). While the use and adoption of technology bring additional investments in education, education expenditures in the GDP in the OIC countries for the 2017-2020 period seem to have remained at the same level.

Figure 2-4 Government Expenditure in OIC Countries (% of GDP)



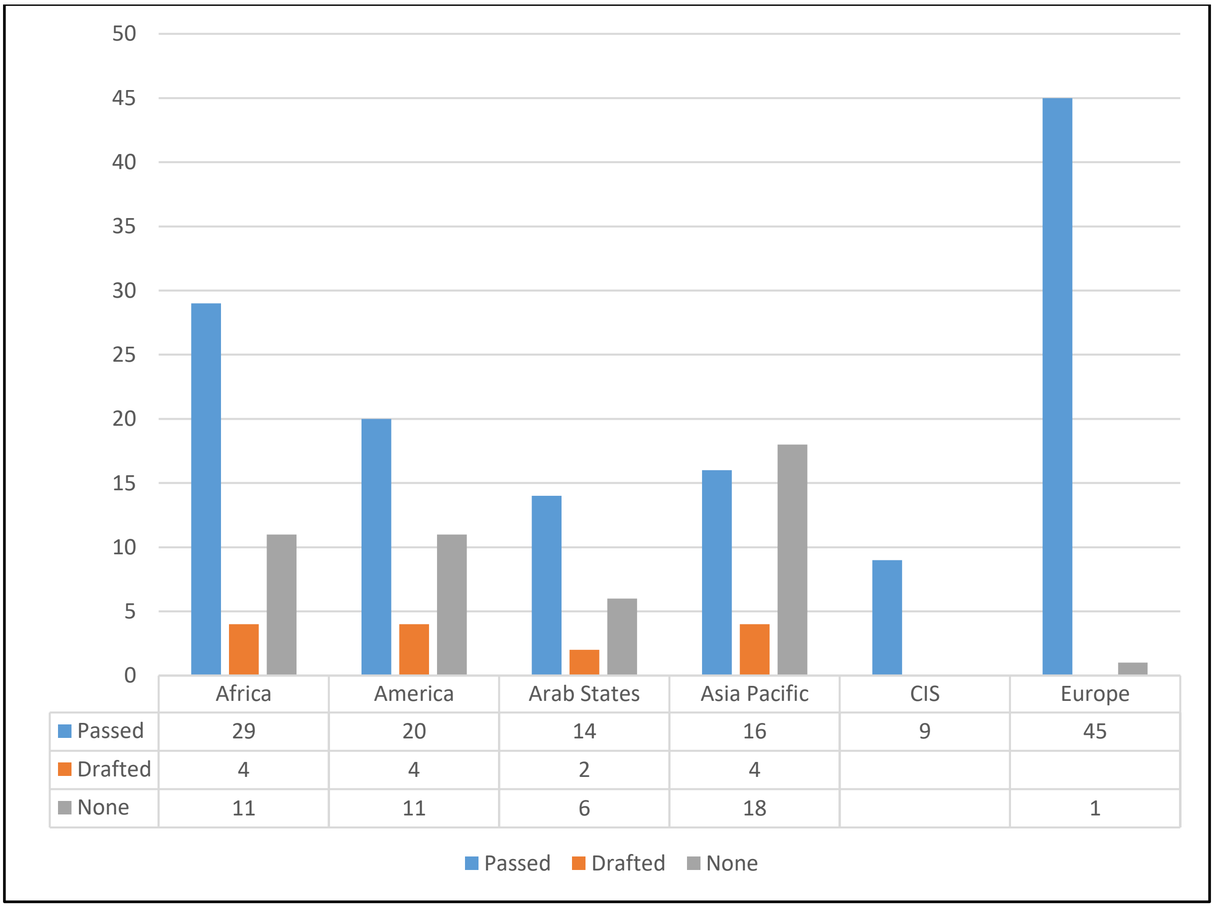
Source: SESRIC 2022.

2.4 ICT Infrastructure and Trust Environment

Technology is a very broad concept with different dimensions, affecting all businesses and processes of individuals, institutions/organizations, and states. As a result of technology, digital transformation has decreased the expenses associated with doing international business, enabled the coordination of global value chains, aided in disseminating ideas and technologies, and connected more companies and customers globally (OECD, 2023a). Technology-related external elements that influence company operations are referred to as the technical environment. Developments in technology have an impact on how a firm conducts business. As a result of changes in the technical environment, a company may need to alter its operational strategy drastically (UOC, 2023). Digital infrastructure is the backbone of the digital economy. In general, digital infrastructure comprises connectivity (such as high-speed internet and internet exchange points), internet of things, and cloud computing (such as mobile devices, computers, sensors, voice-activated devices, geospatial instruments, machine-to-machine communication, vehicle-to-machine communication). Vehicle communications and data stores (such as data centres and clouds), as well as the accessibility to meaningful connections among users are crucial for the growth of the digital economy (UNCTAD, 2022b). OIC countries' inadequate physical and digital infrastructure are the main weaknesses. Concerning the fixed broadband internet connection subscriptions per 100 population, the group average of OIC countries was 5.4 in 2020, which remained very low when compared to the averages of the world (15.7), non-OIC developing countries (14.8), and developed countries (37.5) (SESRIC, 2020).

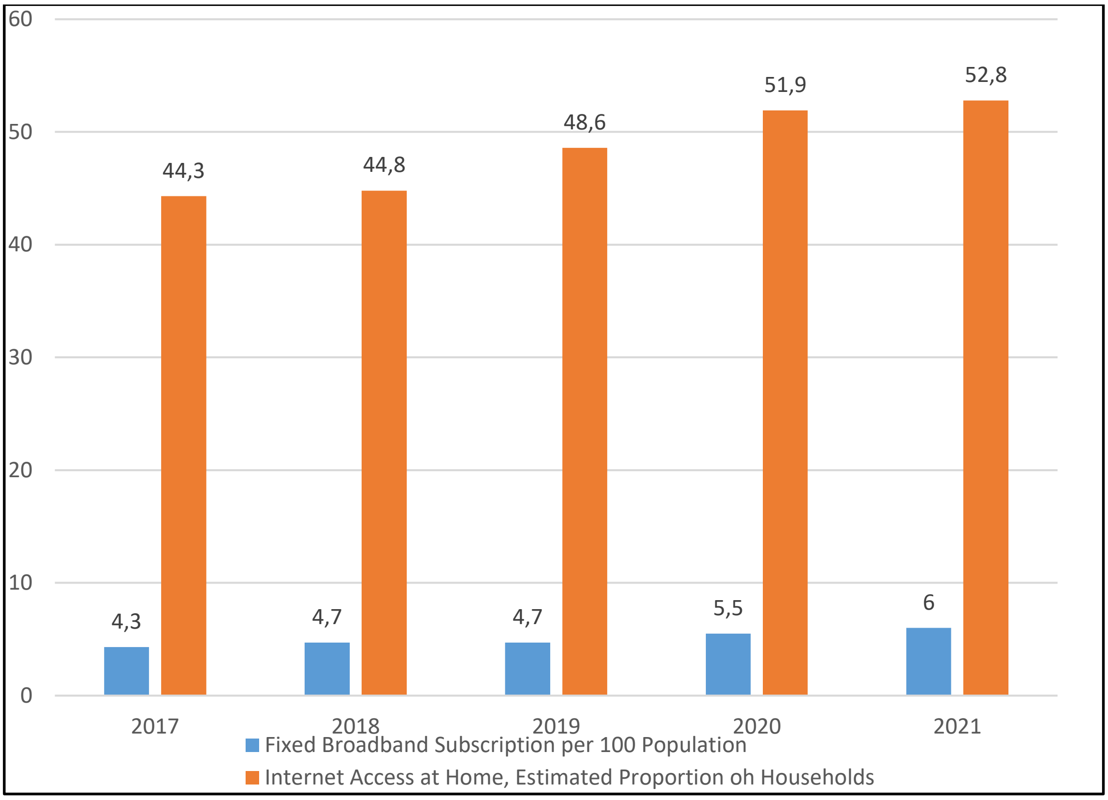
An environment of trust is a governance system that enables digitization, strikes a balance between data enablers and protections, and defends people, organizations, and institutions against cybersecurity threats. It is critical to enhance data protection regulations, cybersecurity capabilities, and the digital ID system to improve trust in digital transactions. Data protection: Regulation of data protection might considerably enhance the climate of trust, facilitating the growth of digital financial services and digital companies. Cybersecurity: Increasing digitization around the world exposes states, economies and societies as a whole to new and more significant cyber risks. As digital technologies support personal lives and business activities in many industries, cybersecurity must become an integral part of the overall digital ecosystem. Digital ID: The ID provides an effective access to digital services (World Bank, 2023a).

Figure 2-5 Countries with Data Protection Legislation



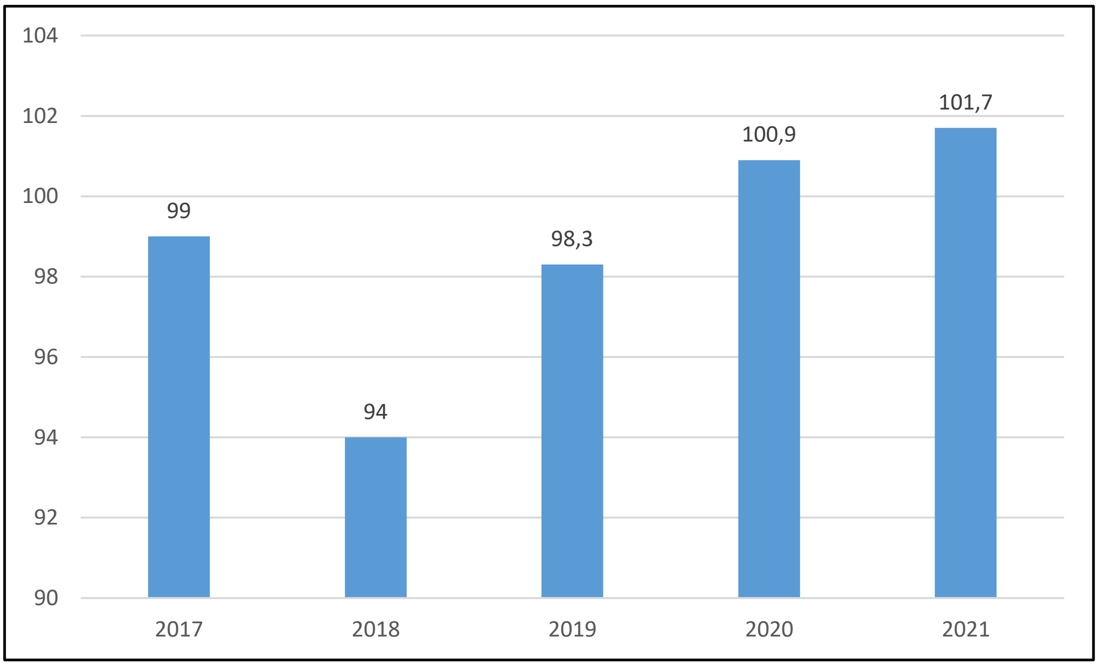
Source: Source: GCI, 2020.

Figure 2-6 Internet Access in OIC Countries



Source: SESRIC, 2022.

Figure 2-7 Mobile Cellular Subscriptions (Per 100 people)



Source: SESRIC, 2022.

2.5 Trade Facilitation and Logistics

Transporting products and services between producers and consumers is made possible by effective logistics and trade facilitation. As a result, supply chains become more effective, and the trade community experiences a decrease in costs, bureaucracy, and bottlenecks. Traders need smooth supply chains, including effective border management and clearance procedures, as well as logistical infrastructure and services, in order to compete in the global economy (Saez, et al, 2023). The basic components of the trade facilitation concept are (World Bank, 2016):

- Customs and border management
- Streamlining documentary requirements
- Trade infrastructure investment
- Port efficiency
- Transport security
- Logistics and transport services
- Regional trade facilitation and trade corridors
- Transit and multimodal transport

It is seen that a significant part of the items in the trade facilitation concept is related to logistics. Although logistics is not directly included among the external environmental factors of the business in the literature, it should be considered an independent determinant because it is one of the most critical components of the e-commerce ecosystem in a country. The logistics environment and its interaction with e-commerce are more complex as there are different types of providers and services that compete and cooperate (such as e-fulfilment providers; consolidators, final delivery operators; cross-border delivery and reverse logistics) (WEF, 2018). A nation's capacity to compete on a global scale can be significantly hampered by having ineffective or insufficient transport, logistics, and trade-related infrastructure networks. Developing countries, especially landlocked developing countries, face significant challenges in tackling trade facilitation issues, and trade facilitation projects require significant investments. For example, only the World Bank spent about $5.8 billion on trade facilitation projects in the fiscal year 2013 (World Bank, 2016).

IBRD/World Bank publishes logistic performance indexes (LPI) based on countries on a regular and open access basis[1]. LPI components are divided into six groups; customs, infrastructure, ease of transport arrangements, quality of logistics services, tracking and tracing, and timeliness. According

[1] https://lpi.worldbank.org/report

to the 2018 Report, generally, high-income countries, most of which are in Europe, are in the top 10 in the LPI ranking as they dominate the supply chain industry(IBRD/World Bank, 2018).

The report after 2018 was published in 2023, and the changes that occurred after 2018 are stated as follows; “Measuring logistics performance and understanding its determinants are now more important than ever against a background of major changes in global markets since 2018 due to the COVID-19 pandemic, subsequent shipping and air freight disruptions (the latter from restrictions imposed on passenger air transport), and Russia’s invasion of Ukraine” (IBRD/World Bank, 2023). There are 12 economies at the top of the 2023 logistics performance rankings (Table 2.2).

Table 2-3 Top LPI Economies (2022)

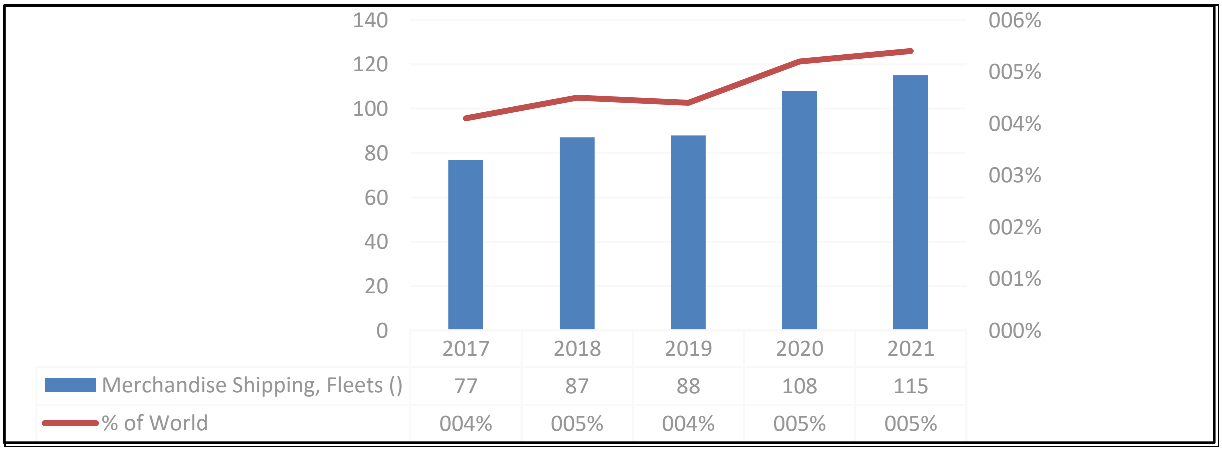
	LPI		**Customs**		**Infrastructure**		**International Shipments**		**Logistics competence and equality**		**Timeliness**		**Tracking and Tracing**	
Economy	**Grouped rank**	**Score**	**Sc.**	**Gr rank**	**Sc.**	**Gr rank**	**Sc.**	**Gr rank**	**Sc.**	**Gr rank**	**Sc.**	**Gr rank**	**Sc.**	**Gr rank**
Singapore	1	4,3	4,2	1	4,6	1	4,0	2	4,4	1	4,3	1	4,4	1
Finland	2	4,2	4,0	4	4,2	5	4,1	1	4,2	3	4,3	1	4,2	3
Denmark	3	4,1	4,1	2	4,1	9	3,6	14	4,1	9	4,1	10	4,3	2
Germany	3	4,1	3,9	7	4,3	3	3,7	8	4,2	3	4,0	17	4,2	3
Netherlands	3	4,1	3,9	7	4,2	5	3,7	8	4,2	3	4,0	17	4,2	3
Switzerland	3	4,1	4,1	2	4,4	2	3,6	14	4,3	2	4,2	4	4,2	3
Austria	7	4,0	3,7	14	3,9	16	3,8	4	4,0	11	4,3	1	4,2	3
Belgium	7	4,0	3,9	7	4,1	9	3,8	4	4,2	3	4,2	4	4,0	16
Canada	7	4,0	4,0	4	4,3	3	3,6	14	4,2	3	4,1	10	4,1	11
Hong Kong SAR, China	7	4,0	3,8	12	4,0	14	4,0	2	4,0	11	4,1	10	4,2	3
Sweden	7	4,0	4,0	4	4,2	5	3,4	26	4,2	3	4,2	4	4,1	11
United Arab Emirates	7	4,0	3,7	14	4,1	9	3,8	4	4,0	11	4,2	4	4,1	11

Source: IBRD/World Bank, 2023

The highest-scoring countries are concentrated in Europe, but East Asia and the Pacific, North America, and the Middle East and North Africa are also represented. The lowest-scoring countries are low-income and lower-middle-income countries with fragile economies affected by armed conflicts, natural disasters or political unrest, or facing geographical challenges. The gap between top and bottom performers continues. *(IBRD/World Bank, 2023)*

Over 90% of traded products are transported over the seas, making ocean shipping the primary form of international trade, and maritime transport forms an integral part of the socio-economic value chain for all countries (OECD, 2023b). Certain points on maritime trade routes are strategic Maritime Chuck Points, which provide strategic advantages to countries controlling them as they connect two larger areas. Six primary maritime choke points (Bab el-Mandeb, Strait of Gibraltar, Strait of Hormuz, Strait of Malacca, Suez Canal and Turkish Straits) out of eight worldwide are controlled by OIC countries (SESRIC, 2020). The collective share of OIC countries in the total world container port traffic decreased from 15.9% in 2010 to 15.6% in 2019 (SESRIC, 2020). The group of OIC nations (64 km) was far behind the globe (125 km), non-OIC developing nations (86 km), and developed nations (390 km) in terms of rail network density per million inhabitants in 2019. When the reports are examined, it is seen that most of the OIC countries are behind in the ranking of Trade Facilitation and Logistics. However, there are also good practice examples. For example, Abu Dhabi Advanced Trade and Logistics Platform(ATLP) is considered a good practice example for trade facilitation and logistics. ATLP, overseen by the Abu Dhabi Department of Economic Development, aims to improve the experience of customers and stakeholders in logistics and trade facilitation while facilitating land, sea, and air trade. It also serves industry and free zones. The ATLP platform, an integrated platform where many public and private organizations engage and which satisfies all the requirements of the stakeholders in the logistics and trade sector, is one of the leading efforts in the area in terms of its scope of service. ATLP provides services such as single window solutions, standardization of e-payment services, policies and laws, and stakeholders' proper management of resources (ADDED, 2023).

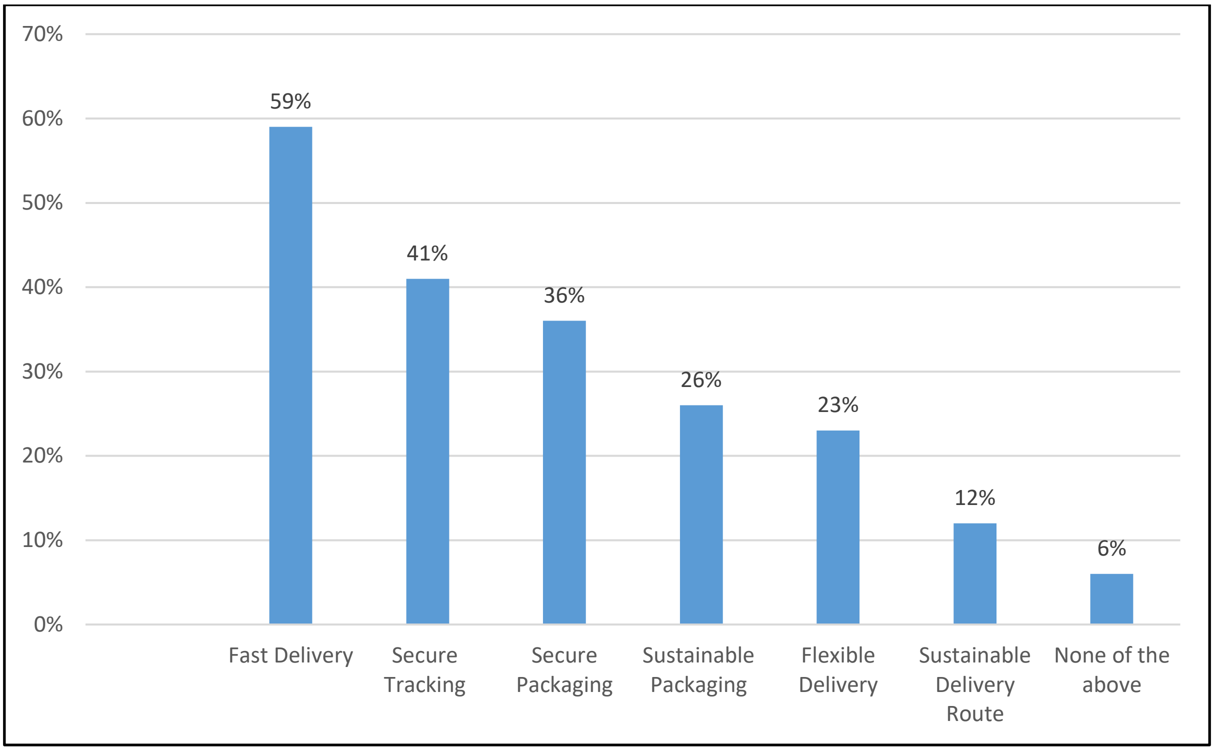
Figure 2-8 Total Merchant Shipping Fleet of OIC and Its Share in Global Goods Transport by Sea



Source: SESRIC, 2022.

Based on the results of the study conducted on consumers in the USA and the UK, the most influential factor in consumers' online purchase decisions is prompt delivery (59%). Fast delivery is followed by secure tracking (41%), secure packaging (36%), sustainable packaging (26%), flexible delivery (23%), and sustainable delivery route (12%). The research results also show the importance of logistics in online purchasing (Statista, 2023a).

Figure 2-9 Factors that Influence Online Purchase Decisions In the USA and the UK in 2022



Source: (Statista, 2023a)

The new era of logistics, which has evolved into Logistics 4.0, a definition derived from Industry 4.0, is based on the automation of business and logistics processes and the networking of devices and companies with each other. The aim of Logistics 4.0 is to simplify processes, increase efficiency and stabilize global supply chains. The new logistics era will speed up e-commerce processes, use big data, accelerate international networks and force close cooperation, use robot technologies, ensure flexible use of different logistics channels, and emphasize environmental sustainability (DHL, 2022).

2.6 Key Partners and Initiatives of E-commerce Environment

In the international e-commerce environment, there are important organizations that harmonize e-commerce between countries, set rules, produce policies, carry out projects, and make comparative analyses. The leading organizations are listed below.

World Trade Organization: The World Trade Organization (WTO) operates the global system of trade rules and helps developing countries build their trading capacities. It also provides a forum for its members to negotiate trade deals with each other and resolve trade issues they face. Born out of fifty years of negotiations, the WTO aims to reduce trade barriers, helping to open markets when countries face trade barriers (WTO, 2023a). In some cases, WTO rules support the protection of trade barriers. The primary objective of the organization is to promote the free flow of trade, which supports the integration of developing countries into the international trade system by promoting economic growth and employment. Trade negotiations, implementation and monitoring, dispute settlement, building trade capacity, and outreach can be listed as the main activities of the organization (WTO, 2023b). The two initiatives of the World Trade Organization for E-commerce are listed below.

WTO Joint Initiative on E-commerce: At the 11th Ministerial Conference in December 2017, seventy-one WTO members decided to start the preliminary stages of future WTO negotiations on trade-related elements of e-commerce. Seventy-six WTO members said collectively in January 2019 that they intended to start these negotiations. With the involvement of as many WTO members as possible, they resolved to "attempt to establish a high standard solution" that builds on current WTO accords and frameworks. As of February 2023, there are eighty-eight WTO members participating in these discussions, accounting for over 90 percent of global trade (WTO, 2023c).

WTO eLibrary on E-commerce: Providing the WTO Electronic Commerce e-Library enables access to e-commerce-related WTO resources, multimedia content, WTO data, and e-commerce infographics as well as other valuable resources (WTO, 2023d). This initiative is also important in terms of providing a common language e-commerce in the world.

United Nations Conference on Trade and Development: Another international organization associated with e-commerce is the United Nations Conference on Trade and Development (UNCTAD). UNCTAD conducts analysis, works for consensus, and provides technical assistance for developing countries to improve trade, investments, financial opportunities, and better use of technology (UNCTAD, 2023a). E-commerce and the digital economy are among UNCTAD's priority topics.

ETrade for all platform: The "eTrade for all" effort, which UNCTAD is spearheading, intends to increase the ability to develop nations, especially the Least Developed Countries, to use and profit from e-commerce (ETrade, 2023a). "ETrade for all" is a multi-stakeholder effort, aiming to increase diversity in the digital economy. It aspires to expand the conversation on the effects of digital transformation on development and serve as a reliable and valued information hub on the numerous resources available to aid developing nations in their transition to e-commerce (ETrade, 2023b). "The Development Solutions" within the E-Trade platform offers capacity-building programs to each partner regarding e-commerce and digital economy in one or more of the seven key policy areas identified by the initiative. These areas are e-commerce assessments, ICT infrastructure & services, payment solutions, trade logistics, legal & regulatory frameworks, skills development, and access to financing (ETrade, 2023c).

E trade for women: This initiative supports female digital entrepreneurs in developing countries with the financial support of Germany, Switzerland, the Netherlands, and Sweden. In this context, different training programs are organized for women entrepreneurs engaged in e-commerce in a network platform where they can share their knowledge and experiences. Besides, the policy dialogue initiative is underway to promote gender-sensitive policy (Ewomen, 2023).

The UNCTAD eWeek forum: The e-week forum is a leading event for ministers, senior government officials, CEOs and other business representatives, international organizations, development banks, academics, and civil society to discuss development opportunities and challenges related to the digital economy (Eweek, 2023).

European Commission: The Commission helps shape EU general strategies, proposes new EU laws and policies, monitors their implementation, and manages the EU budget. The Commission also plays an active role in international development and assistance (European Commission, 2023a). The work of the European Commission is vital for the development of world trade and e-commerce in particular.

The EU4Digital Initiative: One of the main policies of the EU is the harmonization of digital markets. EU support in this area is directed through the EU4Digital Initiative, which brings together priority actions and programs in the field. The facility focuses on supporting six key policy areas: telecom rules, trust & security, e-Trade, ICT innovation, e-Health, and e-sKills (EU4Digital, 2023a). The European Union promotes integrated frameworks for e-commerce, e-Customs, and eLogistics through its EU4Digital effort. It helps facilitate and standardize commerce between eastern partner nations and the EU (Etrade, 2023b).

Digital Partnerships: The EU is establishing digital partnerships with some partner countries, such as South Korea and Singapore, to advance cooperation on various digital issues, such as reliable data flow and data innovation, standards, and digital technology, as well as the digital economy and commerce for the transformation of private sector companies and public services (European Commission, 2023b).

The Ready4Trade in Central Asia: Another exemplary initiative is the EU-funded Ready4Trade project in Central Asia. The project aims to contribute to sustainable and inclusive economic development in the region by supporting investment, competitiveness, and trade in Central Asia. The Ready4Trade in Central Asia project is implemented by the International Trade Centre (ITC) in close cooperation with national partners in Central Asia, and it aims to make cross-border requirements more transparent, remove regulatory and procedural barriers, strengthen business capacity to comply with commercial formalities and standards and develop cross-border e-commerce (EEAS, 2023).

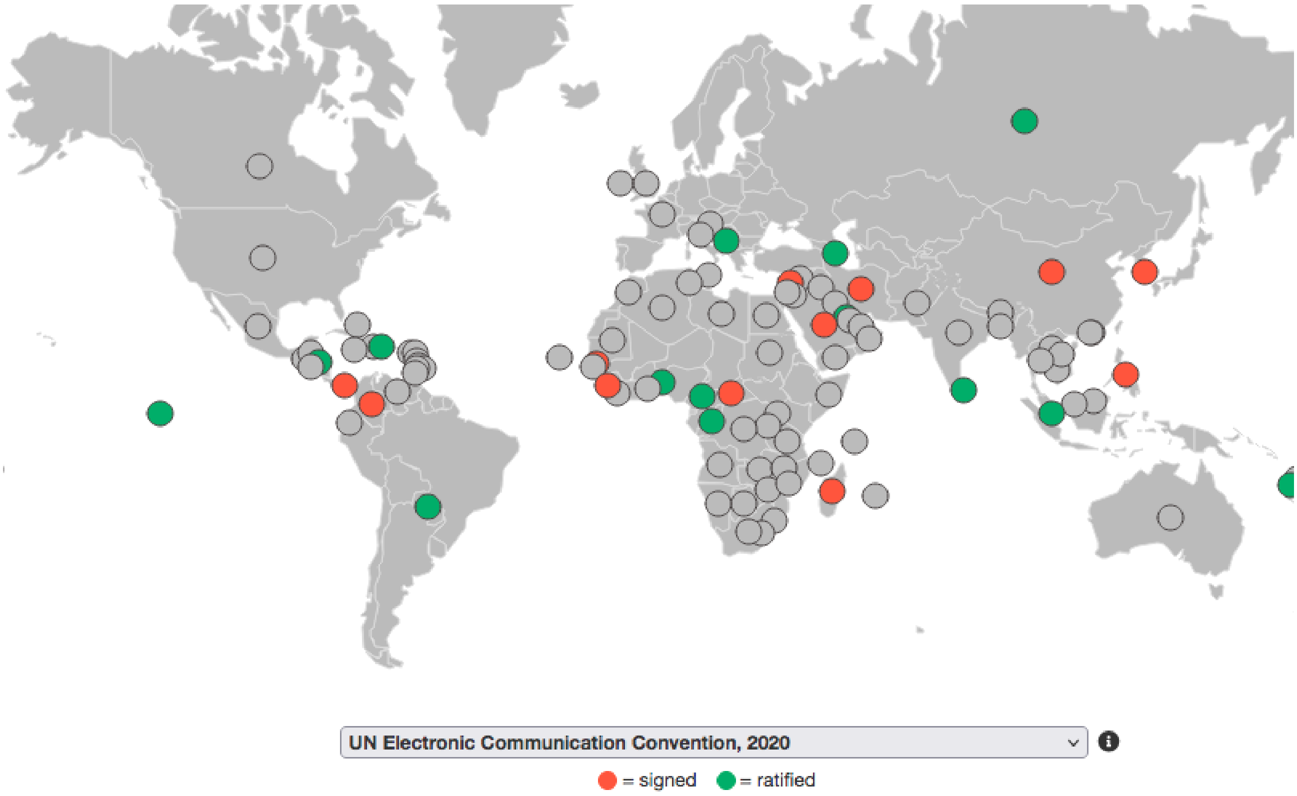
Organisation for Economic Co-operation and Development (OECD): OECD is an international organization that provides a unique forum and knowledge hub for data and analysis, exchange of experiences, best-practice sharing, and advice on public policies and international standard-setting (OECD, 2023c)

The OECD Trade Committee: Established in 1961 as one of the OECD's founding policy committees, the OECD Trade Committee work oversees on trade policy and provides a unique forum for senior trade policy officials to discuss key policy issues and developments in trade relations. Committee delegates from the capitals meet twice a year to share information and exchange views between OECD and partner countries and international organizations to discuss common trade policy analyses. The Committee's views on the development of international trade and trade policy are transmitted directly to the participating government capitals and the annual meeting of the OECD Council at the Ministerial Level (OECD, 2023d).

OECD Digital Trade: The OECD's work on digital trade aims to contribute to ongoing debates by helping policymakers better identify and respond to emerging challenges arising from digitalization. This includes analysis of issues from defining and measuring digital trade through what market openness means in the digital era, including in relation to services restrictiveness, to the implications of specific issues such as data flow regulation or new technologies such as 3D printing (OECD, 2023a).

Digital Trade Inventory: The purpose of the Digital Trade Inventory is to aid nations in navigating the changing environment by compiling a list of the current regulations, guiding concepts, and standards crucial for digital commerce (OECD, 2023a).

Figure 2-10 Digital Trade Inventory



Source: OECD, 2023c.

When the relevant country is selected on the world map in the Digital Trade Inventory link, it is possible to learn the legal and some other mandatory documents for the relevant country.

World Bank: The World Bank is a body made up of 189-member countries and has offices in more than 130 regions. The World Bank has five institutions working towards sustainable solutions for poverty reduction and shared prosperity in developing countries (World Bank, 2023d). In the World Bank, where many different projects are carried out, and information is shared, two initiatives related to e-commerce stand out.

Tcdata360: TCdata360 website, which provides open data on trade and competitiveness developed by the World Bank, collects and visualizes data from different sources and presents it together with other information and resources. Website visitors can view data at the country, topic, or indicator level, view current and historical data to identify trends and gaps, download data from multiple sources or connect to it via an API, download country snapshots containing data from multiple sources, display indicators across countries and compare those over time (Tcdata, 2023).

World Integrated Trade Solution: With the World Integrated Trade Solution developed by the World Bank, users can access information about trade and tariffs. This initiative has been developed in collaboration with the United Nations Conference on Trade and Development (UNCTAD) and in consultation with organizations such as the International Trade Centre, the United Nations Statistics Division (UNSD), and the World Trade Organization (WTO) (Wits, 2023).

The World Customs Organization (WCO): One of the most important issues of International E-Trade is Customs. The World Customs Organization (WCO), established as the Customs Cooperation Council (CCC) in 1952 as an independent intergovernmental body aiming to increase the efficiency and productivity of customs administrations, represents 185 Customs administrations that account for approximately 98% of world trade. As the global center of Customs expertise, the WCO is the only international organization with competence in Customs matters (WCO, 2023a). Via the WCO website, general rules for the interpretation of the harmonized system, access to more than 400 international and regional trade agreements, services such as special valuations of goods, trainings are provided online (WCO, 2023b).

The United Nations Economic Commission for Europe (UNECE): UNECE was set up in 1947 and its one of five regional commissions of the United Nations. It's major aim is to promote pan-European economic integration which includes 56-member States in Europe, North America and Asia (UNECE, 2023a). The Trade programme, implemented by UNECE, Economic Cooperation and Trade Division, works to develop economic relations among member States, as well as to better integrate their economies into the world economy. These bodies also suggest ways and means of creating legal and administrative frameworks for fostering trade.. Studies carried out in this context can be exemplified as trade facilitation, regulatory and standards policy, commercial agriculture standards and e-business standards (UNECE, 2023b). Relevant topics are trade facilitation, regulatory and standards policy, commercial farming standards and e-business standards. Within the scope of these headings, recommendations are given, standards are determined and projects are carried out.

E-Trade Networks: In the face of the increasing importance of e-commerce, associations or initiatives have created different networks. These networks undertake functions such as making the voice of e-commerce businesses heard by policymakers, creating commercial ties among their members, and accessing documents and information valid in international e-commerce.

The European Digital Commerce Association (Ecommerce Europe) On the European platform for digital commerce, national associations, company members, and business partners can network and share best practices and exchange information on issues concerning their business. E-commerce Europe represents, via its national associations, more than 150,000 companies selling goods and services online to consumers in Europe. The main activities of e-commerce Europe are digital regulations, digital transactions and innovation, logistics, taxation, sustainability platforms, and trust (Ecommerce Trustmark) (Ecommerce, 2023).

AfricaPLC: AfricaPLC is a B2B/B2G e-commerce marketplace and FinTech platform headquartered in South Africa, established to improve trade flows, cross-border payments, supply chain transparency, and access to business intelligence and international markets in Africa. According to the website, partners of AfricaPLC include organizations such as DHL, CIPS, and African investors. Supporting organizations include the International Chamber of Commerce (ICC) and The Continental Business Network. Five million SMEs are digitized on this platform (AfricaPLC, 2023).

African E-commerce platform: This e-commerce platform was launched by the Kenya Trade Network Agency (KenTrade) to exchange documents. The platform, which is at the pilot stage in Kenya, Morocco, Tunisia, Cameroon, and Senegal, is planned to be integrated into 22 member countries of the African Electronic Commerce Alliance (AAEC). The platform is intended to reduce the business costs and help traders exchange information on trade as the African Continental Free Trade Agreement (AfCFTA) takes shape. Senior officials state that intra-African trade will only be successful if member states adopt the technology (Theeastafrican, 2022).

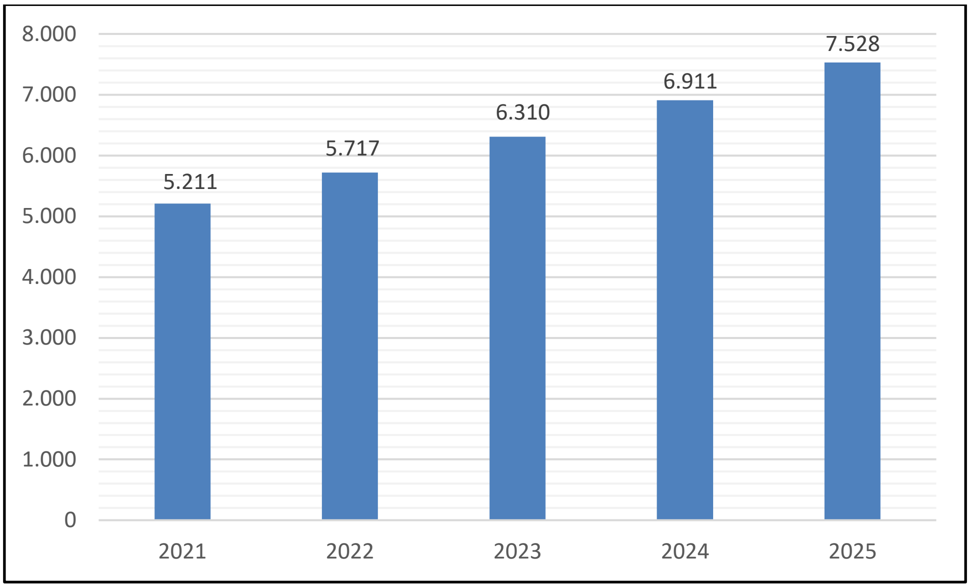
2.7 Current Trends of E-commerce

E-commerce is following a growing and developing process day by day. On the one hand, countries develop their e-commerce infrastructures and capacities, this developing process is reflected in e-commerce figures, on the other hand, e-commerce applications reach very advanced dimensions with the developing technology. Parties involved in e-commerce should pay attention to some trends. E-commerce is changing due to reasons such as economic parameters (inflation rates, exchange rate and GDP) age criteria (an increase in the young population and mature people’s adaptation to e-commerce), and technological adaptation (social media, mobilization and internet usages). Various statistics and indicators are compiled to guide customers, businesses, and also governments. In this section, e-commerce trends in the world and OIC countries will be examined on the basis of indicators, and then some important trends in e-commerce for businesses will be discussed.

2.7.1 Trends on E-commerce Based Indicators

Up-to-date statistics are published by many organizations to show the status and future projections of e-commerce, and the analysis of these statistics helps governments, companies, and third parties determine a roadmap in light of these statistics. Macro e-commerce statistics show that e-commerce will be a rising trend. Worldwide retail e-commerce sales in 2021- 2026 predictions are shown below (Baluch, 2023).

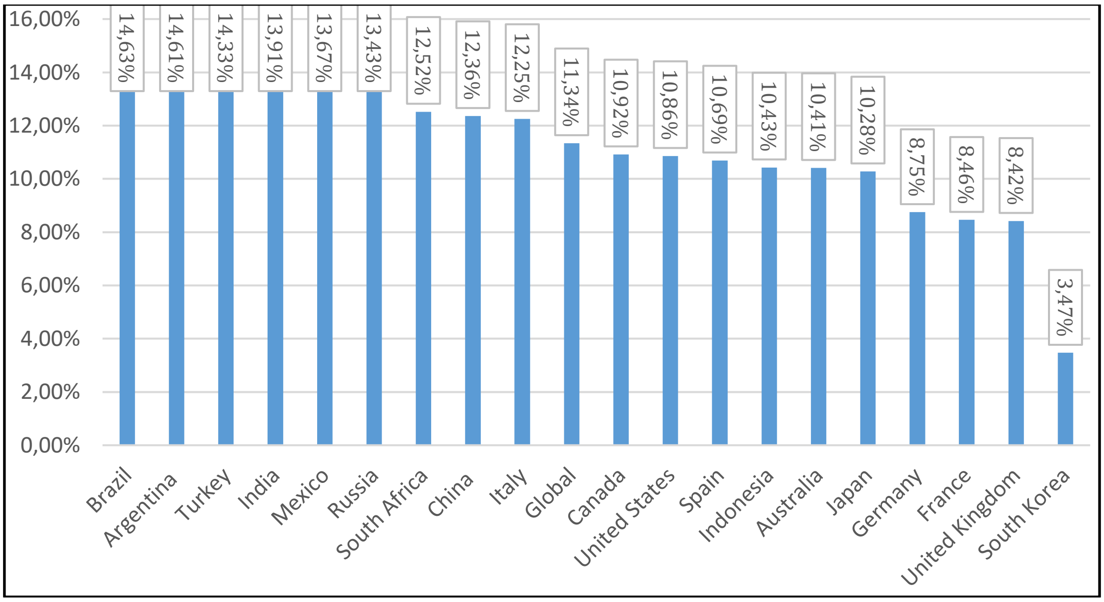
Figure 2-11 Worldwide Retail E-commerce Sales in 2021- 2025($ Trillion)



Source: Baluch, 2023.

It is expected that as e-commerce continues to grow, the market shares will also increase. These data show that businesses should consider e-commerce as a long-term investment. In particular, the US e-commerce market sales are predicted to reach $1.1 trillion in 2023, up from $904.9 billion in 2022 (Keenan, 2022). With online payment methods becoming more common and digital marketplaces developing, digital shopping behaviors of consumers are developing rapidly, and shopping rates from mobile phones are increasing rapidly. In 2021, nearly four billion consumers worldwide purchased products online. While online shopping has become an important part of the consumer's shopping experience, "offline" shopping, or buying in physical stores, is still the most common method of purchasing products in many industries. Online shopping is the most popular and frequent among the younger generation in modern countries worldwide. However, the number of digital shoppers is growing rapidly, regardless of age and nationality (Statista, 2023b). In 2021, retail e-commerce sales are approximately 5.2 trillion US dollars worldwide. It’s forecasting to reach 8.1 trillion US dollars by 2026 (Chevalier, 2022). The retail purchases of e-commerce in the U.S. are expected %16.4 in 2023, on the other hand, Amazon has the highest market share of all e-commerce companies as %37.8. Walmart, eBay and AliExpress are the companies that follow respectively (Baluch, 2023). Developments in e-commerce continue to vary by country. For example, Latin American countries, including Peru, Brazil, Argentina, Chile, Columbia, and Mexico, boosted their e-commerce sales from $85 billion in 2021 to $104 billion in 2022. Another example is the UK, which is increasing by $85.7 billion in 2023. The UK's e-commerce sales are also expected to increase by $85.7 billion in 2023. India is another country to watch, with a 25.5% growth in sales in 2022, placing it in the top five fastest-growing e-commerce markets in the world. China continues to lead the e-commerce market with its remarkable data, as total online sales reached $2.8 trillion in 2022, accounting for 46.3% of all retail e-commerce sales worldwide. The US follows China in global sales data. The third country is the UK, with a 4.8% share of retail sales, followed by Japan with 3% and South Korea with 2.5%. The top five e-commerce market rankings by country have remained the same since 2018 (Keenan, 2022). The global e-commerce market has grown dramatically over the past years, transforming the dynamics of consumer behavior and business models in various industries. In the retail sector, the global e-commerce market is expected to continue growing between 2020 and 2024. Following the same trend as the global outlook, the Middle East and North Africa (MENA) region has witnessed considerable development in the e-commerce market, with high potential for further growth. In the Gulf Cooperation Council (GCC) region particularly, high per capita income, established logistics networks, and a growing tech-savvy young population offer high spending potential. A region powerhouse, the UAE e-commerce market size is forecasted to reach 17 billion US dollars by 2025 (Statista, 2020).

Figure 2-12 Retail E-commerce Sales Compound Annual Growth Rate (CAGR) (2023-2027)

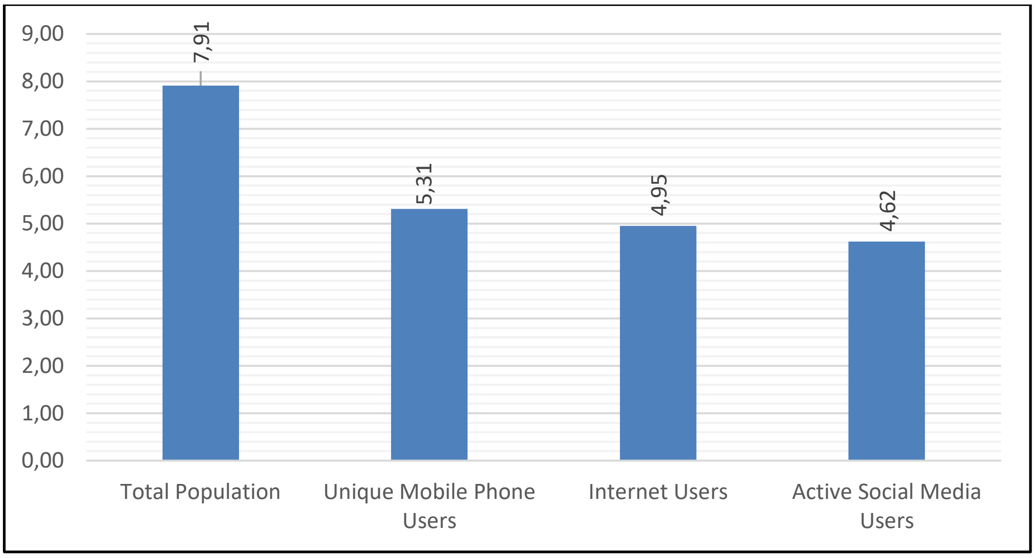


Sources: Statista, 2023c.

Brazil, Argentina and Türkiye are fastest-growing e-commerce markets globally, with over 14 percent growth. Except for Türkiye and Indonesia, there is no country in the OIC countries where progress is expected in retail e-commerce. Amazon and eBay are the most visited online marketplaces worldwide as of 2022. However, in recent years, the e-commerce boom has spawned numerous digital marketplaces, and rivals of the two US-based e-commerce giants are increasing rapidly. Alibaba is in third place in the ranking. Although focused solely on the Chinese market, Taobao and Tmall were the world's leading online marketplaces based on gross merchandise volume (GMV), totaling US$711 and $672 billion in 2021. A domestic player has taken the Latin American market by storm. With an expected compound annual growth rate of approximately 62 percent between 2020 and 2022, Mercado Libre is among the fastest-growing online marketplaces worldwide (Chevalier, 2023). In May 2022, the Türkiye-based platform Trendyol was the leading e-commerce website in the Middle East region, with over 101 million average monthly visits. Hepsiburada, also a Türkiye-based platform, was the second most visited, with around 68 million average monthly visits (Statista, 2022).

Online advertising is an integral part of e-commerce (Fedorko, 2019). Growing technologies in the Middle East and North Africa region (MENA) are also helping to increase the use of digital advertising (Statista, 2023d). The Middle East is an attractive market for marketers to increase their brand awareness. It has a growing middle class, a large population, and high internet usage rates. The country with the highest spending on digital advertising in MENA in 2021 was Saudi Arabia, followed by the UAE. Home to the headquarters of many internet giants and digital agencies, Dubai is also at the centre of reach in the online advertising market in the Pan-Arab region (Statista, 2023d). This rapid pace of growth can be attributed to several factors, such as demographic changes and the rapid adoption of new technologies. Population growth rates and the presence of a young population are also contributing factors. It is worth noting that the Americas have experienced an 18% increase in e-commerce sales, despite already being a developed market. This demonstrates the potential for growth in even mature e-commerce markets (Duong, 2022). The development of e-commerce shows a parallel development with population growth, the use of mobile tools in the population, and the use of social media tools. In order to understand the situation of e-commerce in the world, it is necessary to look at a few pieces of data. As of 2022, the world population is 7.91 billion, of which 57.0% live in urban areas. The number of global mobile users was 5.31 billion at the start of 2022, corresponding to 67.1% of the world population. According to data on internet users, 4.95 billion people worldwide, or 62.5% of the global population, use the internet. Moreover, there are 4.62 billion active social media users worldwide, representing 58.4% of the global population, meaning that one out of every two people worldwide is a social media user. The figure is shown below (Wearesocial, 2022);

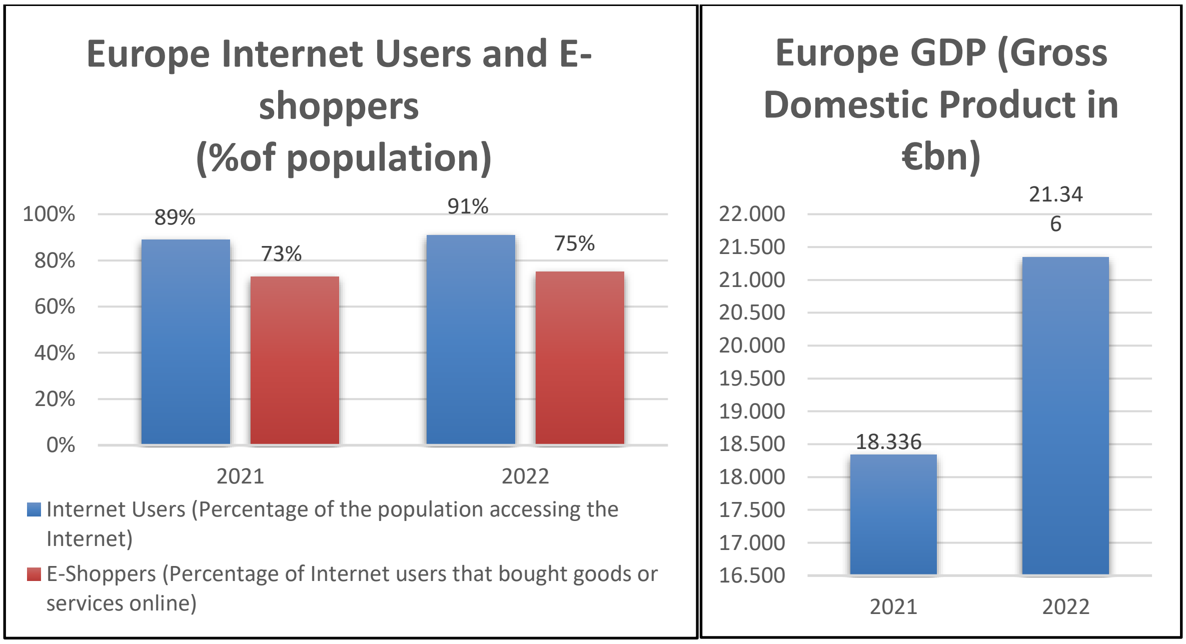
Figure 2-13 Essential Digital Headlines(Billion)



Source: Wearesocial, 2023.

In 2021, Europe experienced growth in e-commerce. Especially Eastern Europe has a higher growth rate of B2C e-commerce sales. Technological adoption increases these numbers. The increase in e-commerce market shares is also related to technological adoption (Ecommerce Europe & Eurocommerce, 2022).

Figure 2-14 Europe Internet Users, E-shoppers and GDP Information

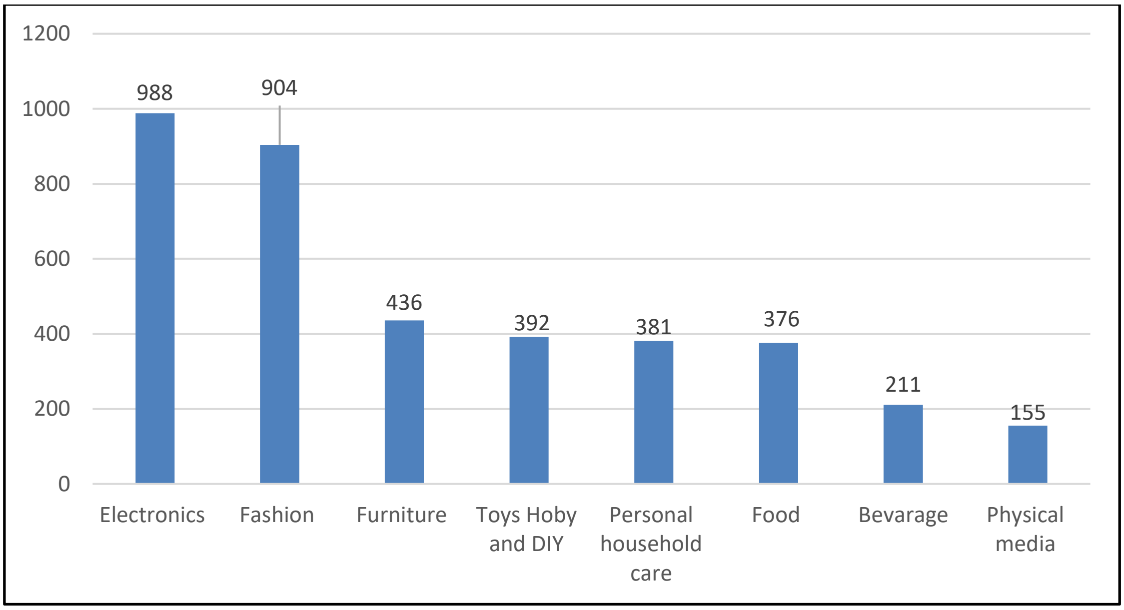


Source: Ecommerce Europe & Eurocommerce, 2022.

In particular Europe indicate some data. The EU-27 which has 27-member countries is a flagship of Europe according to B2C e-commerce. The EU-27 despite the European pandemic conditions and the departure of the UK, it has grown by 16% in 2021 (Ecommerce Europe & Eurocommerce, 2022).

Global revenues associated with online purchases of consumer goods $3.78 trillion for the year as a whole. Number of people purchasing consumer goods via internet. Other data is share of consumer goods e-commerce spend attributable to purchase made via their mobile phone %60.1. the number of purchase goods and services through internet is 3.78 billion people. Other statistics are categories of consumer goods is listed below (Wearesocial, 2022).

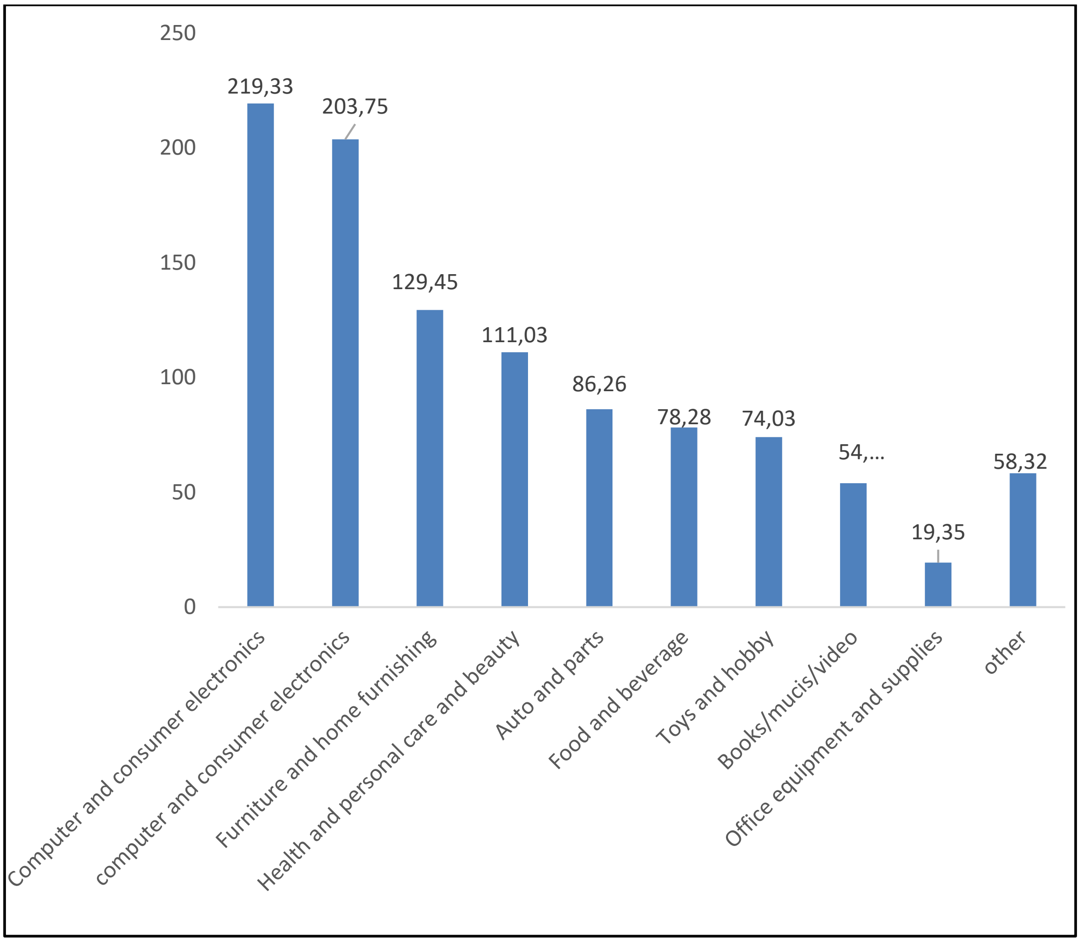
Figure 2-15 E-commerce: Consumer Goods Categories, (Billion USD)



Source: Wearesocial, 2022.

E-commerce statistics show the distribution of e-commerce in developed countries and regions based on product categories. The largest country in terms of e-commerce volume is the USA, and the sectoral distribution of e-commerce in 2022 is given in Figure 2.6 (Oberlo, 2022).

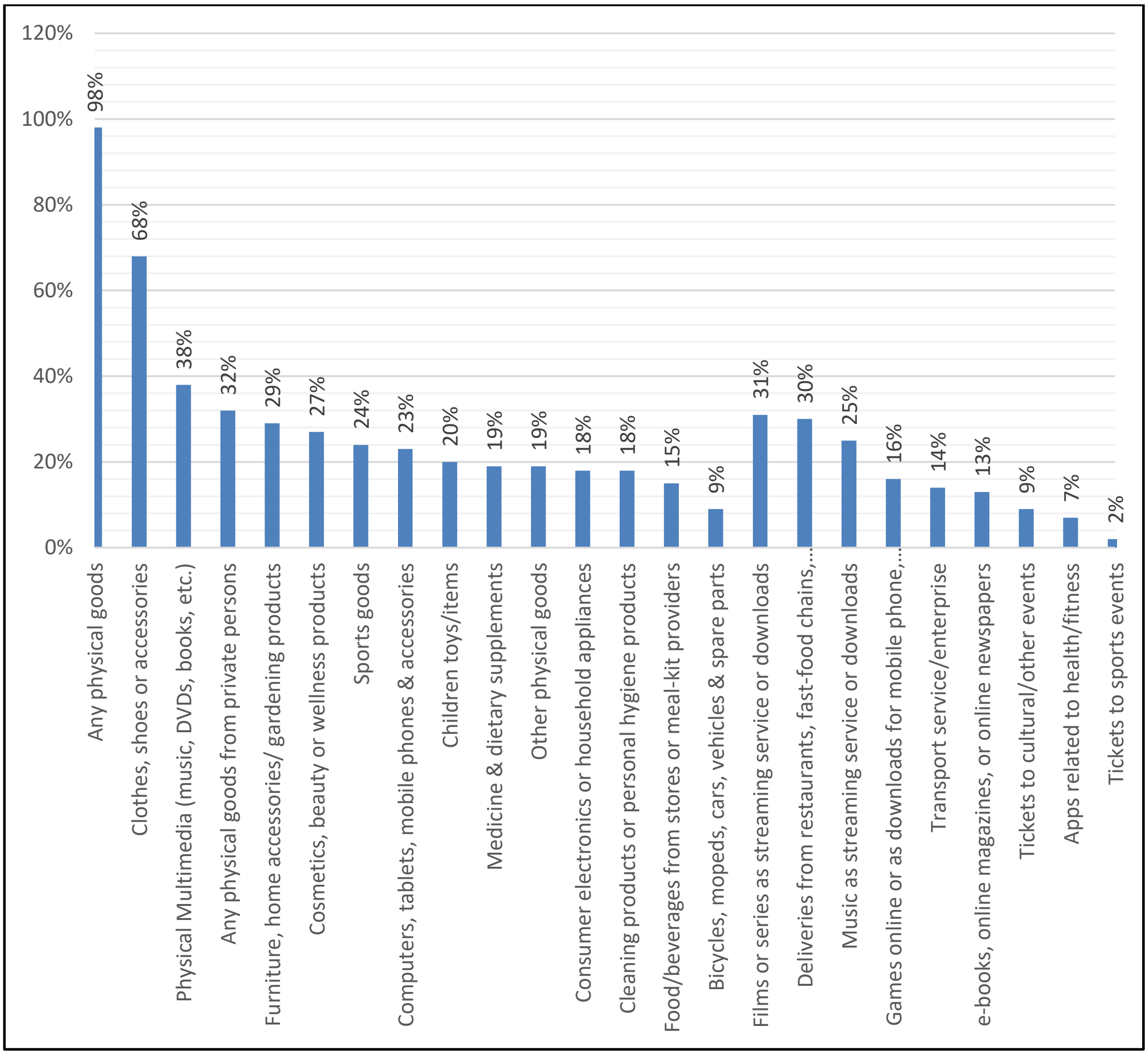
Figure 2-16 E-commerce: Product Categories in the USA (Billion USD, 2022)



Source: Oberlo, 2022

As it is shown figure 2.6, computers and consumer electronics are at the top of consumer goods categories, with $219.33 billion in sales in the US. The following categories, in order, are apparel and accessories, furniture and home furnishing, and health, personal care, and beauty (Oberlo, 2022). The first category is consistent with the world ranking. For the EU-27 countries, more detailed categories are provided and are listed separately as goods and services. The aforementioned information is given below (Ecommerce Europe & Eurocommerce, 2022);

Figure 2-17 E-commerce EU-27 Product Category Purchasing (Percentage of Individuals Who Purchased Online in the Last 3 Months)



Source: Ecommerce Europe & Eurocommerce, 2022.

Compared to the USA, it is seen that the rankings of e-commerce categories in the EU-27 countries are different. In the EU-27, clothes, shoes, and accessories are the top-ranked categories.

OIC Institutions and development partners are engaged in financing and technical assistance efforts to member states to improve trade and investment and national and regional value chains between OIC countries by organizing further promotion, facilitation, financing, and insurance activities for intra-OIC trade transactions (COMCEC, 2022). However, there is no consolidated data on e-commerce covering all OIC countries. Below is a graph of e-commerce determinants based on selected countries

Table 2-4 OIC E Commerce Stats in Selected Countries

	UAE	Malaysia	Morocco	Indonesia	Egypt	Worldwide	Nigeria
Internet Users % Total populations	99%	96,8%	88,10%	77%	72,20%	64,40%	55,40%
Using mobile phones to access the internet	91,43%	200%	100%	98,30%	94%	92,30%	97,50%
Number of cellular mobile connection compared with total population	200%	129,10%	133,30%	128,00%	93,90%	105,60%	87,70%
Percentage of internet users aged 16 to 64 who buy something online each week	65,30%	61,30%	28,10%	62,60%	38,10%	57,60%	52,40%
Percentage of internet users aged 16 to 64 who buy something online each week via mobile phone	32,40%	37,70%	4,80%	36,80%	17,10%	29,30%	13%
Percentage of shoppers ages 16 to 64 who use a mobile phone to make at least one of their online purchases each week	52%	61,50%	17,10%	58,80%	44,90%	50,90%	24,80%
Percentage of internet users who buy groceries online each week	37%	28,70%	10%	38,10%	18,70%	28,30%	28,60%
Total full year 2022 consumer digital payments transaction value as a percentage of GDP	5,22%	4,49%	3,35%	5,59%	2,89%	8,36%	2,41%
Percentage of adults aged 15+ who own a credit card	28,60%	7,90%	1,10%	1,60%	2,80%	24,50%	1,60%
Estimated full year 2022 spend on consumer goods e-commerce as a percentage of GDP	2,30%	2,09%	1,14%	4,34%	1,46%	3,53%	1,31%
The total amount spends by consumer on mobile apps as a percentage of GDP	0,09	0,15	-	0,05	0,03	0,18	-

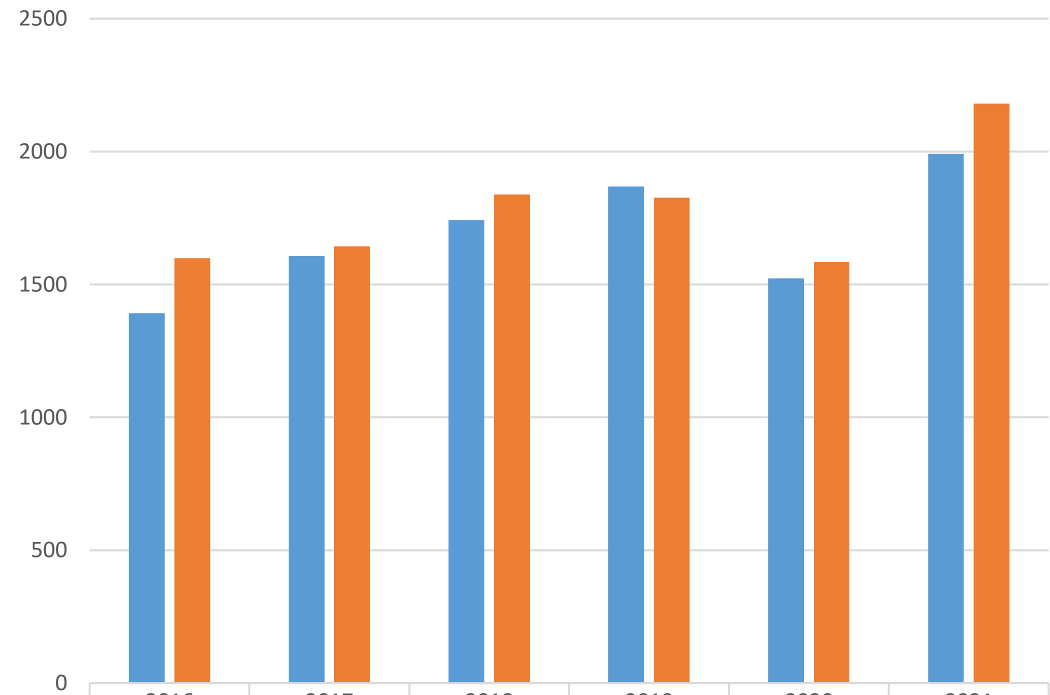
Source: Wearesocial, 2022.

When the graph is examined, internet usage among the total population, excluding Nigeria, is above the global average. The lowest rate of internet access via mobile phone is in the UAE, while countries outside the UAE are above the global average. In the 16-64 age group, the proportion of those who shop online once a week is the lowest in Morocco (28%). The UAE, Malaysia, and Indonesia are above the global average. Despite this, when the GDP ratio of consumer products spent in e-commerce in

2022 is analyzed, it is seen that all of the countries within the scope of the analysis are well below this rate, with the global average at 8.36%.

However, the trade potential within the OIC countries has a potential for developing e-commerce between countries. The main actors of the foreign trade of the OIC Member States are Malaysia, Türkiye, United Arab Emirates, Indonesia, Saudi Arabia, Egypt, Iraq, Bangladesh, Nigeria, and Qatar, which accounted for about 72.17% of this trade in 2021. The major players in trade in services in the member states in 2020 were United Arab Emirates (122 billion USD), Saudi Arabia (64 billion USD), Türkiye (61 billion USD), Malaysia (55 billion USD), Qatar (54 billion USD), Indonesia (39 billion USD), Egypt (33 billion USD), Kuwait (26 billion USD), Nigeria (24 billion USD), and Morocco (21 billion USD) (COMCEC, 2022.). They accounted for about 500 billion USD or 73% of the Member States' trade in services in 2020 (COMCEC, 2020).

Figure 2-18 Trade Evolution of the OIC Member States between 2016 and 2021(Billion USD)

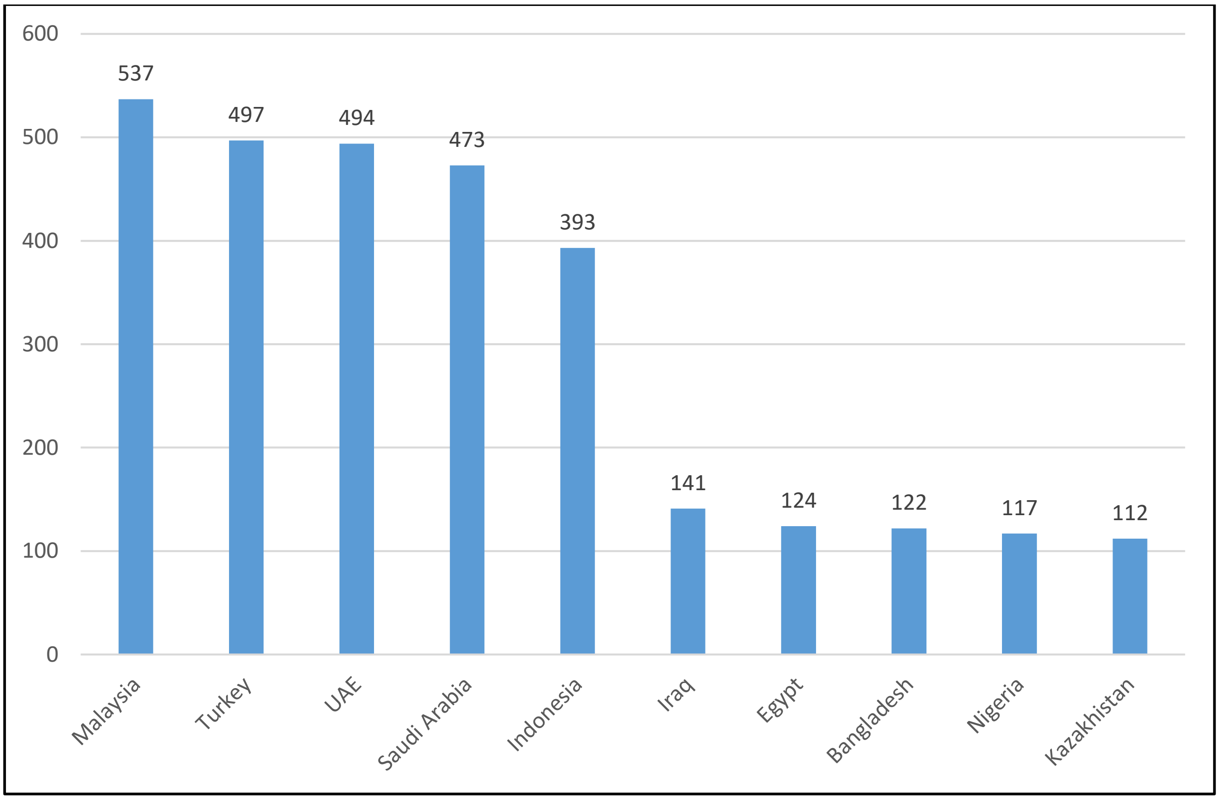


	2016	2017	2018	2019	2020	2021
World Exports	1392	1607	1742	1869	1523	1991
World Imports	1599	1644	1839	1826	1584	2180

World Exports World Imports

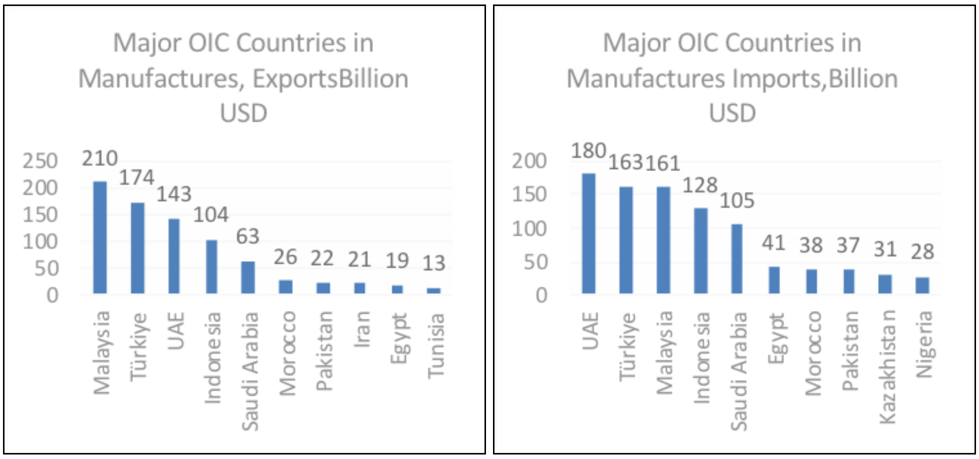
Source: COMCEC, 2022.

Figure 2-19 Foreign Trade Players of OIC Member States in 2021 (Milliards USD)



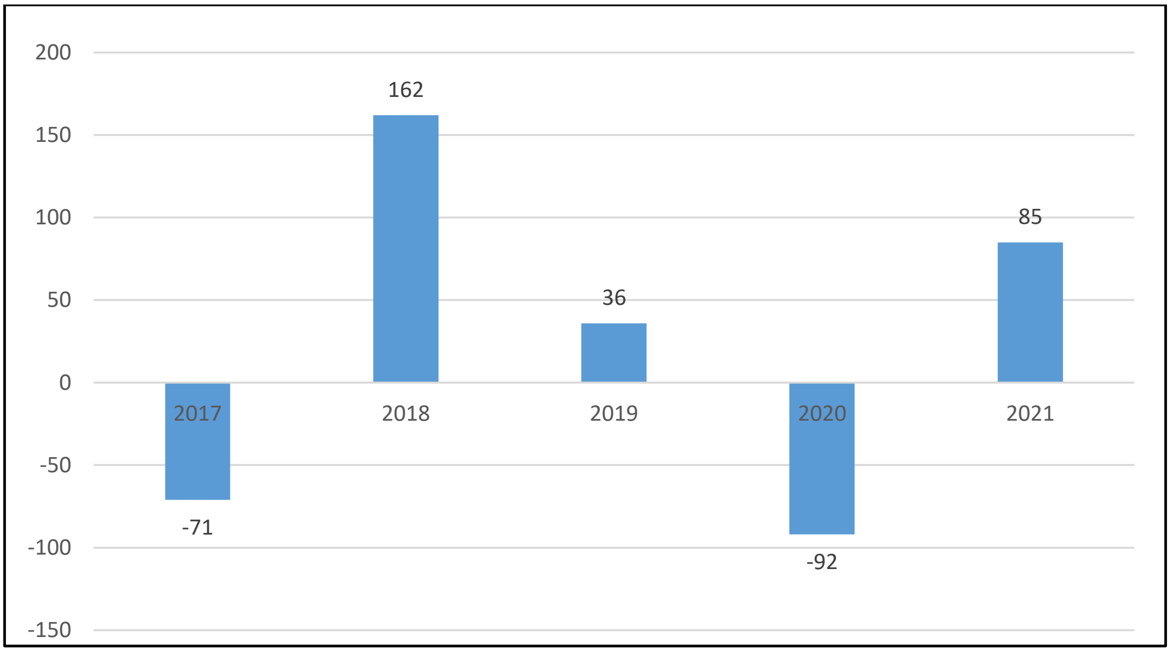
Source: COMCEC, 2022.

Figure 2-20 Major OIC Countries in Manufactures, Exports/Imports (Billion USD/2021)



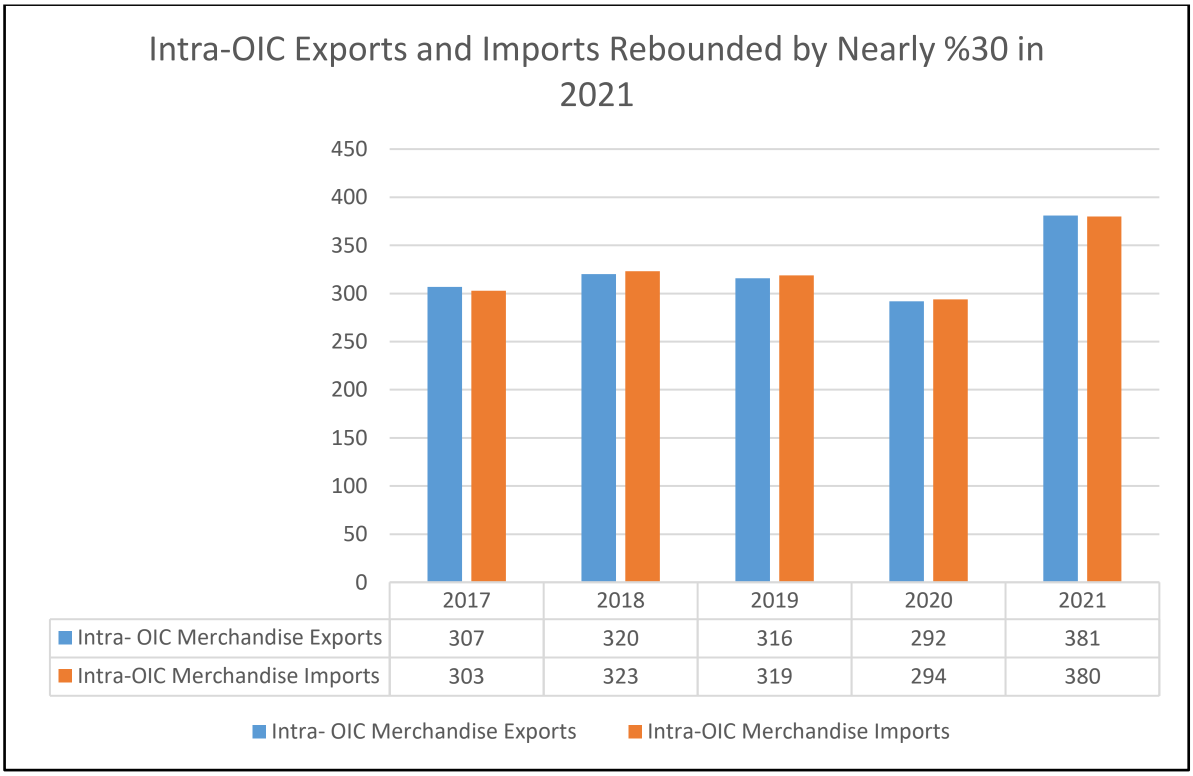
Source: SESRIC, 2022.

Figure 2-21 OIC Merchandise Trade Balance (Billion USD/2021)



Source: SESRIC, 2022.

Figure 2-22 Intra-OIC Exports and Imports (2021)



	2017	2018	2019	2020	2021
Intra- OIC Merchandise Exports	307	320	316	292	381
Intra-OIC Merchandise Imports	303	323	319	294	380

Source: SESRIC, 2022.

The COVID-19 pandemic impacted intra-OIC trade between 2019 and 2020 with a decrease of 21%.

Table 2-5 Trade Development of the OIC Countries 2016-2020(Billion USD /%)

	2016	2017	2018	2019	2020	2021	Development 2016-2020	Development 2019-2021
World Exports	1391,73	1607,37	1741,59	1869,31	1544,47	1991,34	143,08%	6,53%
Intra-OIC Exports	278,38	322,81	390,46	373,31	266,6	384,61	138,16%	3,03%
Share of Intra-OIC Exports	20%	20,08%	22,42%	19,97%	17,26%	19,31%	96,56%	-3,29%
World Imports	1599,44	1644,1	1839,31	1826,33	1539	2180,57	136,33%	19,40%
Intra-OIC Imports	277,94	321,52	361,04	327,56	286,23	363,73	130,87%	11,04%
Share of Intra-OIC Imports	17,38%	19,56%	19,63%	17,94%	18,60%	16,68%	95,99%	-7,00%
World Trade	2991,17	3251,47	3580,9	3695,64	3083,47	4171,91	139,47%	12,89%
Intra-OIC Trade	556,32	644,33	751,5	700,87	552,83	748,34	134,52%	6,77%
Share of Intra-OIC Trade	18,69%	19,82%	21,02%	18,95%	17,93%	18,00%	96,29%	-5,04%

Source: COMCEC 2022

The main products exported among the OIC Member States in 2020 were gold, telephones and network cables, petroleum oils, petroleum gas, palm oil, passenger cars, ethylene polymers, jewelry, computers, cigars, propylene polymers, automobile spare parts, iron, bakery products and electric cables. Intra-OIC imports are dominated by the following products: gold, petroleum oils, telephones and network cables, palm oil, petroleum gas, ethylene polymers, passenger cars, cigars, aluminum, medicines, coal and briquettes, hydraulic cement, iron and steel, and bakery products. It is seen that a significant part of these products is products that are subject to e-commerce in the world.

2.7.2 New Business Trends in E-commerce

With the ever-increasing expectations and demands of consumers, businesses and administrations, constantly developing technologies have evolved into innovative applications in e-commerce. Change is pretty fast. Realizing the socio, economic and environmental potential of e-commerce, governments try to improve the e-commerce environment in their countries with strategy documents, encouraging policies, and digital and physical infrastructure investments. In addition to governments, some of the current trends that have emerged with the development of technology, the increase in consumers' demand for e-commerce, and the concentration of businesses on e-commerce are listed below. It is important to follow e-commerce trends in order to a gain competitive advantage. Technological progress necessitates it, otherwise, businesses, governments and consumers are leaving the benefits of e-commerce behind. In this case, adaptation becomes the keyword. Being aware of trends and adapting quickly to make business will take one step ahead. Some important current trends in e-commerce can be listed as follows.

Mobile and Social Commerce: Mobile commerce is a type of online transaction on mobile devices such as smartphones and tablets. Mobile devices are the most preferred tools for making a purchase. Examples of mobile commerce can be listed as a purchase, social commerce, mobile banking, mobile payments (and transactions), marketplace apps, and mobile ticketing (West, 2022). 292 million people are expected to have their own mobile device by 2024, and 187 millions of them will shop via their smartphones. These data show that increasing number of mobile device owners seem to take mobile commerce to a different point (Stanley, 2022). The integration of e-commerce and social media is called social commerce. Social commerce is based on selling goods and services via social media platforms. Nowadays, consumers want to shop in social media. It allows consumers to have fast and enjoyable customer experiences (Yltaevae, 2023). An increasing number of social platform users head for shopping through the platforms (Wearesocial, 2022). Social commerce is growing as a tool of e-commerce. Global sales of social commerce in 2022 were predicted to be $992 billion. Social shopping leader is China, which is followed by the US. Base on research in 2020, in India, %45 of internet users watched influencers who use social media as a job, and %83 of them were likely to buy what is promoted (Chevalier, 2022). Thailand, India and China, %80 of whose population use social media, are leading in social trade (Yltaevae, 2023). The three most popular product categories purchased from social networks are clothing, groceries, and food services. While social media usage is highest among individuals aged 26-45, it has also gained popularity among all age groups. This generation was the first to experience digital transformation and quickly adapted to its use. However, along with its convenience and entertainment value, there are also concerns such as insecure payment options and insufficient product information (Yltaevae, 2023).

Personalization and local language: Many online businesses today cater to a global audience. However, a 2014 report by Common Sense Advisory, which surveyed 3,000 consumers in 10 countries, found that 75 percent of consumers are more likely to purchase goods and services when product information is presented in their native language. Furthermore, 87 percent of non-English speaking consumers do not shop on English websites (Kwintessential, 2023). To address this, e-commerce platforms have begun providing services in local languages. While this is advantageous for international platforms, it poses a serious threat to local businesses.

E-residency: It is first started in Estonia and the second country to be implemented is Azerbaijan. A person from any country in the world can open a bank account, establish a business, open a physical company and even employ e-citizenship by obtaining e-citizenship without ever coming to Azerbaijan (Digitalhub, 2023). In this case, e-commerce companies can easily establish and operate their headquarters/branches in different countries without any restrictions. The increase in e-residency applications will completely eliminate borders for businesses, countries will attract investors from different countries and enter the race to protect their own businesses.

Digitized trade documents: Transferable documents and instruments are essential commercial tools and their availability in electronic form would be beneficial for electronic commerce. The Model Law on Electronic Transferable Records (MLETR) aims to enable the legal use of electronic transferable records both domestically and across borders. Transferable documents or instruments typically include bills of lading, bills of exchange, promissory notes and warehouse receipts. Electronically transferable records may be particularly relevant for developing countries that are interested in creating markets in certain business areas such as transportation logistics and finance ("fintech"). The International Chamber of Commerce (ICC) is putting a lot of effort in removing legal obstacles for global electronic trade documentation implementation. The ratification of the UN ESCAP Paperless Trade Framework will move things even further. The framework has been ratified and implementation is already underway, – and alignment with MLETR and WTO/ICC digital interoperability standards is a major part of that. The framework supports digitalization efforts in 54 countries, all of which are willing to provide technical support to co-members just starting on the path of digitalization. Bahrain, Belize, Kiribati, Papua New Guinea, Paraguay, Singapore, United Arab Emirates, and the Abu Dhabi Global Market free zone implemented MLETR in their legislation. Additionally, as many as 86 countries are currently in early stages of the digitalization process. United Kingdom, Germany and Japan are expected to follow soon (UNICITRAL, 2017).

Technological trends on E-commerce: The five technologies that can cause significant changes in e-commerce by fundamentally changing the allocation of resources and the functioning of international trade are as follows;

> **Blockchain-based technologies:** Those can have a tremendous impact on the global trade supply chain. Trade organizations such as the Dubai Chamber of Commerce and Industry have also launched an initiative to leverage blockchain technology to address global trade issues such as high costs and lack of transparency and security. Blockchain-based solutions are disrupting the world of trade financing (Fan & Chiffelle, 2018).

Artificial Intelligence (AI) and Machine Learning (ML): The use of AI and ML is a natural evolution in developing automated and algorithmic e-commerce (Toller, 2021). E-commerce machine learning is the creation and improvement of applications and algorithms by artificial intelligence that "learns" from a continuous stream of data. It involves not only running AI on a dataset, but also using it to test and modify responses to data (Bigcommerce, 2023). Implementing these new technologies manually could cause significant problems, whereas automating the process can help firms meet their regulatory and compliance requirements (Toller, 2021). These technologies help increase conversions, create more relevant marketing campaigns, improve internal operational efficiency, and make more informed decisions. AI and ML can be successfully used in e-commerce personalization, site search, managing supply and demand, loss forecasting, fraud detection, improved customer service, dynamic pricing and product recommendations. (Bigcommerce, 2023) For example, 75 percent of what Netflix viewers watch comes from product recommendations based on such algorithms. (MacKenzie, Meyer, Noble 2023). Artificial Intelligence (AI) is a source of both huge excitement and apprehension. Estimates show that the potential impact of AI in the middle east alone will reach US$320 billion by 2030 (Pwc, 2018). AI and ML technologies offer great benefits in recognizing informality, which is one of the most important problems of electronic commerce. For example, in e-commerce made through social media, it is important for businesses to be registered when they reach a certain level so that they do not disrupt the competition in the market. Considering that there are millions of transactions, it is these applications that will control them within the given standards.

Metaverse/Virtual Reality: Metaverse is an emerging 3-D capable digital space that uses virtual reality, augmented reality, and other advanced internet and semiconductor technologies to enable people to have lifelike personal and work experiences online and metaverse has the potential to generate up to $5 trillion in value by 2030 (McKinsey, 2022). Now, it is not enough to just put the photos of the products for sale, all the possibilities of technology are used for the maximum consumer experience. For example, a consumer or business will be able to visit the company by wearing VR glasses, examine the products from the perspective they want to see, and meet with company officials, banks and end users in the store in the virtual world. Platforms such as Azexport have already taken their place in Metaverse and started to exhibit products (Azexport, 2023).

Service trades via digital platforms: Thanks to advancing technology, it is becoming increasingly easy to trade online services. For instance, students can improve their English language skills by pairing up with native speakers through websites like Cambly (www.cambly.com), while people can book upholstery cleaning services conveniently through platforms like Armut (https://armut.com/).

3D-printing: 3D printing technology has enabled the production of a wide range of products using digital design files that contain instructions for manufacturing objects from materials such as plastic, ceramic, and metal. Companies can take advantage of this technology to reduce high shipping and tariff costs by sending their design files across borders for local production. This approach has significant potential for the development of e-commerce, as it allows for more efficient and cost-effective manufacturing and distribution processes (Andrenelli & Lopez-Gonzalez, 2022).

Mobile payments: Mobile payment refers to the transfer or payment of money using a digital wallet, mobile browser, or SIM toolkit/mobile menu (Mimnagh, 2023). Recently, consumers have started to adopt cryptocurrency to make payments. According to the Global Payments Report, digital wallets were the most preferred payment method (49%) in global e-commerce in 2022, followed by credit cards (20%) and debit cards (12%). Global e-commerce is projected to grow at a rate of 9% from 2022 to 2026, and it is estimated that the use of digital wallets will increase to 54% over the next three years. For example, in Türkiye, 53% of e-commerce transactions were made using credit cards, while digital wallets accounted for 9% of transactions in 2022. It is expected that credit card usage, which is currently the most popular payment method in e-commerce in South Africa, United Arab Emirates, Saudi Arabia, and Nigeria in the Middle East-East Africa region, will remain at 31%. In comparison, the use of digital wallets will increase from 20% to 27%. Another emerging trend in payment methods is the "buy now, pay later" (BNPL) model. The global e-commerce transaction value for BNPL is expected to increase by 16% in the next three years (GPR, 2023).

3 COUNTRIES EXPERIENCE

3.1 Desk Reviews and Field Visits

Within the scope of this study, Ireland from non-OIC countries was researched as an example of good practice. Desk research was conducted for Azerbaijan, Pakistan, Somalia, Tunisia, and Jordan among the OIC countries, and after the desk research, field visits were made to Jordan and Azerbaijan. Azerbaijan field visit was made on 2-4 August 2023 and information on the current situation and activities in e-commerce was obtained. During this visit, meetings were held with the following institutions and organizations: Ministry of Economy of The Republic of Azerbaijan, Ministry of Digital Development and Transport of the Republic of Azerbaijan, SME Development Agency(KOBİA), Center for Analyses of Economic Reforms and Communication of the Republic of Azerbaijan, National Confederation of Entrepreneurs (Employers) (ASK). Second field visit was made in Jordan between 8-11 August and the interviewed during this visit are: The Central Bank of Jordan, Ministry of Industry, Trade and Support, (Internal Trade Division, Consumer Protection Division, Foreign Policy Directorate), Ministry of Digital Economy and Entrepreneurship, Jordan Enterprise Development Cooperation, Business Development Center and an e-commerce company (Sawaaid), Information and findings from desk research are enriched with information and findings from field visits.

3.1.1 Ireland

3.1.1.1 Background

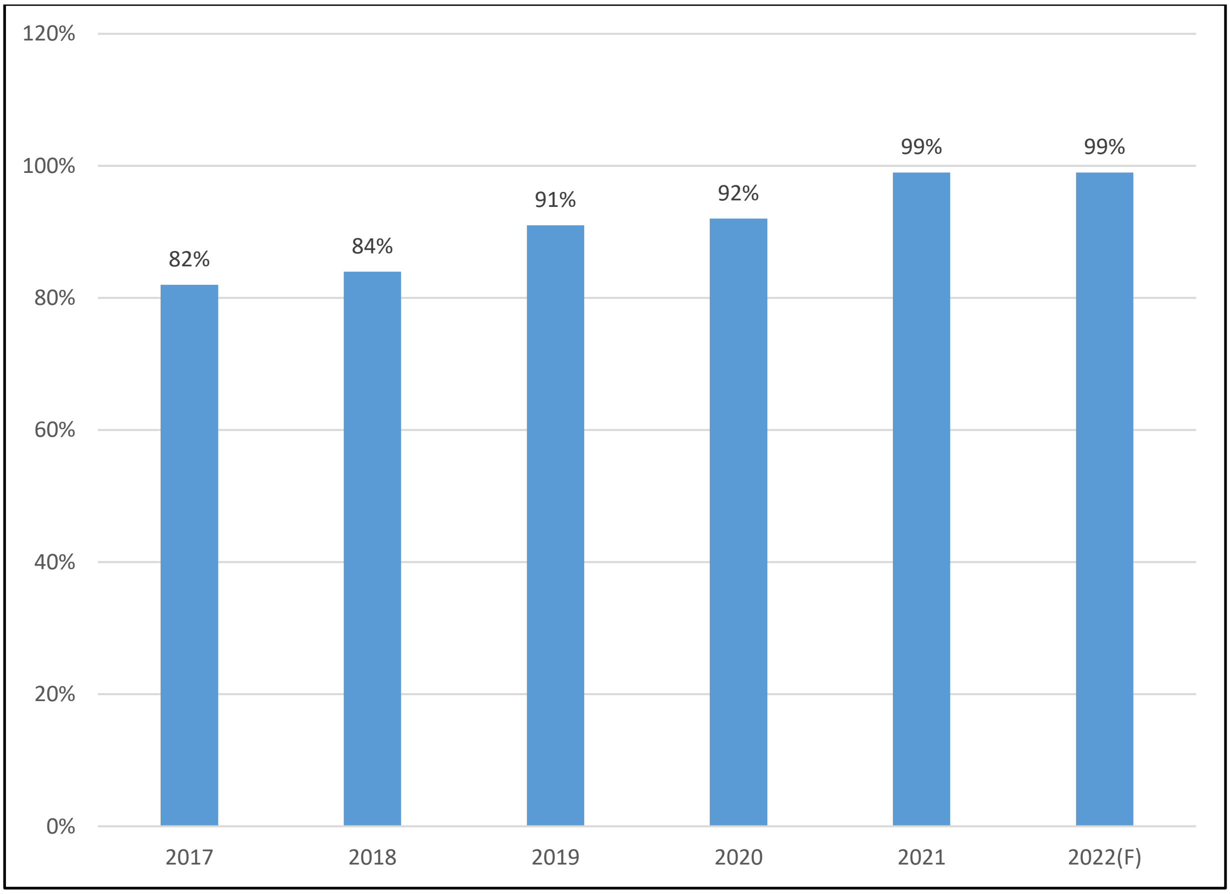
Ireland, which has risen significantly in the last period, was the worst in Europe in 1987 performance economy today it is one of the best performing economies in Europe. Ireland made major investments in communications infrastructure in the early 1980s and implemented policies to support communications and trade infrastructure (Hill, Hoffman, Hoffman, 2005). Ireland which is a non-OIC country, is one of the most developed countries in terms of e-commerce ecosystem and Ranked 8th out of 152 countries according to UNCTAD B2C e-commerce index, 2020, World report (UNCTAD, 2021b)

In recent years, there have been developments in the field of e-commerce worldwide, especially due to the impact of COVID-19. The crisis and technological advancements have been viewed as an opportunity by some countries. Ireland is one of the countries that can be an example of this situation. With the "e-commerce in Ireland: Building the SME Digital Economy" report published by the Irish government in 2012, the work in the e-commerce sector has accelerated, and subsequently, the "Covid-

19 Online Retail Scheme" incentive program provided funding of 28.3 million dollars from 2018 to 2022 (Department of Enterprise, Trade and Employment, 2021a). As a result of all these developments, the e-commerce market size of Ireland, which was 3.1 billion dollars in 2018, increased to 5.98 billion dollars in 2021 and reached 5.56 billion dollars in 2022 (Statista, 2023e). These developments have made Ireland remarkable in the field of e-commerce and require examination of the country with its best practices.

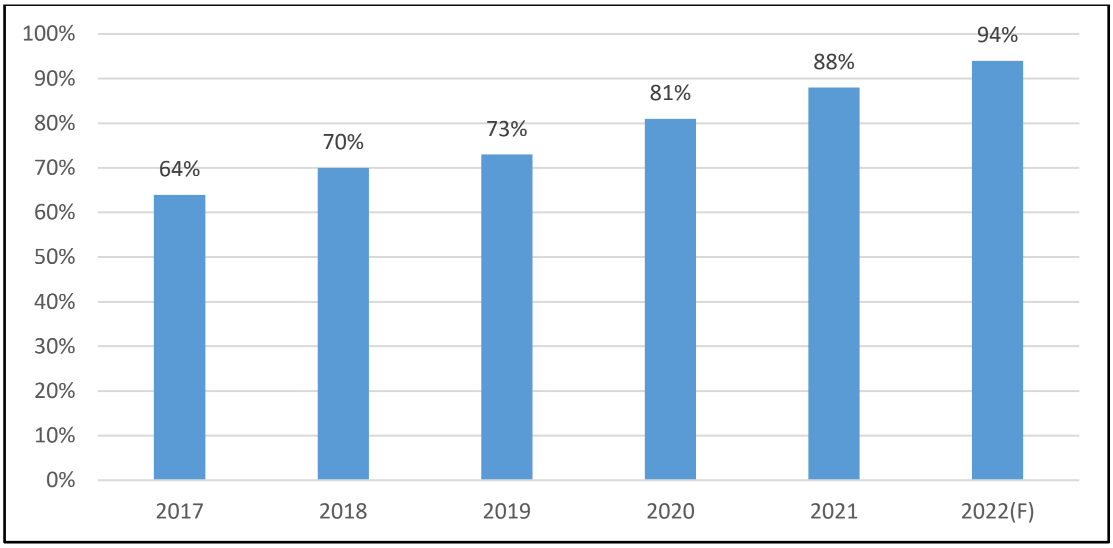
According to recent data, the Republic of Ireland has a population of approximately 4.8 million people, with an average age of 36.8 years (Table 3.1). The country's gross domestic product (GDP) is valued at €294 billion. Ireland is a country with a high internet usage rate, and 94% of internet users in Ireland purchase goods or services online (Figure 3.1, Figure 3.2).

Figure 3-1 Internet Usage



Source: Eurocommerce.eu, 2022.

Figure 3-2 E-Shoppers in Ireland



Source: Eurocommerce.eu, 2022.

In addition to a relatively high level of internet penetration, with 83% of the population using the internet, the country has a strong smartphone penetration rate of 71%. Mobile commerce accounts for a significant proportion of e-commerce sales in Ireland, with a market size of €2.9 billion and a share of 42%. In terms of financial infrastructure, Ireland has a bank account penetration rate of 95.3% and a card penetration rate per capita of 1.37 (Table 3.1).

Table 3-1 Ireland: At a Glance

Variable	Value, Percentage	Source
Population	4.8 million	(Morgan, 2019a)
Average age	36.8 years	(Morgan, 2019b)
Gross domestic product	€294 billion	(World Bank Open Data, 2018)
Mobile commerce market size	€2.9 billion	(Morgan, 2019c)
Mobile commerce as a percentage of E-commerce market	42%	(Ecommerce News Europe, 2018)
Internet penetration	83%	(Morgan, 2019d)
Smartphone penetration	71%	(Morgan, 2019e)
Bank account penetration	95.3%	(Morgan, 2019f)
Card penetration per capita	1.37	(Morgan, 2019g)

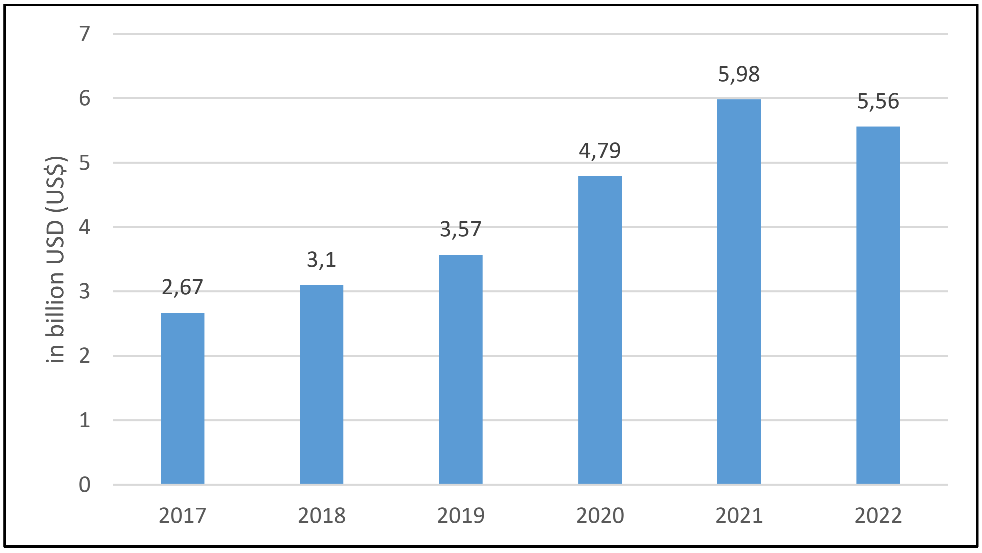
These statistics given in the Figures (3.1, 3.2) and Table (3.1) above highlight Ireland's position as a digitally advanced country, with a well-developed e-commerce market and high levels of internet and smartphone usage, as well as strong financial infrastructure. These statistics show Ireland's growth in the digital economy and makes Ireland's e-commerce applications worth examining.

3.1.1.2 E-commerce and Its Impacts to Ireland

According to forecasts shared on eCommerceDB (2023), the Republic of Ireland is positioned as the 44th largest market in the field of e-commerce. Its estimated revenue is projected to reach $6,638.0 million by 2023, which surpasses that of Singapore. The anticipated compound annual growth rate (CAGR 2023-2027) is 11.2%, with an expected market size of $10,158.4 million by 2027. The Irish e-commerce market is expected to contribute to the global growth rate of 17.0% in 2023, with an estimated increase of 19.3% in that year (eCommerceDB, 2023).

The revenue from e-commerce in Ireland has seen steady growth for years, with forecasted figures indicating further development. In 2017, the e-commerce market in Ireland was valued at 2.67 billion dollars, which increased to 3.10 billion dollars in 2018 and 3.57 billion dollars in 2019. The year 2020 saw a significant increase in e-commerce revenue, with a value of 4.79 billion dollars. These figures demonstrate the resilience of the e-commerce market in Ireland in the face of the COVID-19 pandemic, which has driven many consumers to shift their shopping habits online. The situation in 2021 indicates continued growth in the e-commerce market, with a value of 5.98 billion dollars, and a slight decline in 2022 to 5.56 billion dollars. The steady growth of e-commerce revenue in Ireland indicates the importance of this sector to the country's economy and underscores the need for continued investment and innovation in this area (Figure 3.3).

Figure 3-3 Annual Revenue Development of E-commerce in Ireland



Source: Statista, 2023e.

According to Morgan (2019) Payments Trends – Global Insights Report on e-shopping in Ireland, clothes and sports goods are the most frequently purchased items with 69% of e-shoppers buying from this merchant segment. Following clothes and sports goods are travel and holiday accommodation, with 67% of e-shoppers buying from this segment, and tickets for events with 59%. The household goods segment ranks fourth with 34%, while books/magazines/newspapers, electronic equipment, and films/music are purchased by 28%, 27%, and 26% of e-shoppers, respectively. Computer software, with 17%, is the eighth most purchased item, followed by others at 13%. Food/groceries and computer hardware are less popular, with 12% and 6% of e-shoppers purchasing from these segments, respectively. Finally, medicine has the lowest percentage of e-shoppers, with only 2% purchasing from this merchant segment (Table 3.2).

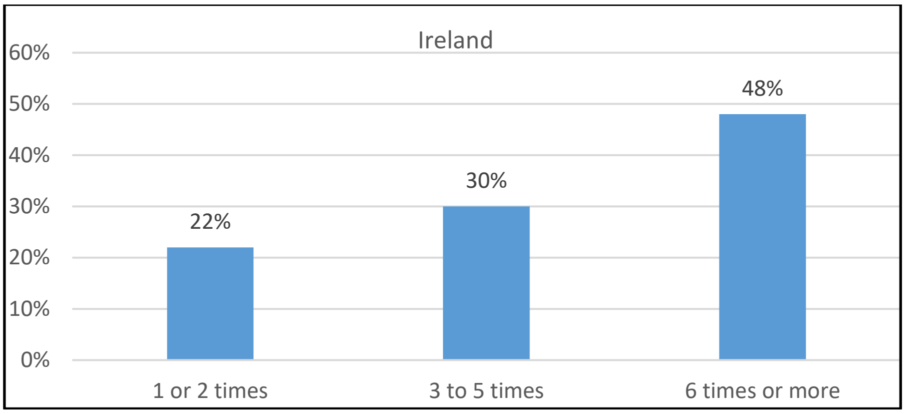
Table 3-2 Percentage of E-shoppers and Merchant Segments

Segment	Percentage of e-shoppers who bought in this merchant segment
Clothes and sports goods	69%
Travel and holiday accommodation	67%
Tickets for events	59%
Household goods	34%
Books/magazines/newspapers	28%
Electronic equipment	27%
Films/music	26%
Computer software	17%
Others	13%
Food/groceries	12%
Computer hardware	6%
Medicine	2%

Source: (Morgan, 2019d)

The percentage of people who made over six online purchases in the last three months in 2021 is noteworthy, standing at 48%. This is followed by a rate of 30% for those who made online purchases three to five times, while the percentage of those who made one or two online purchases is 22% (Figure 3.4).

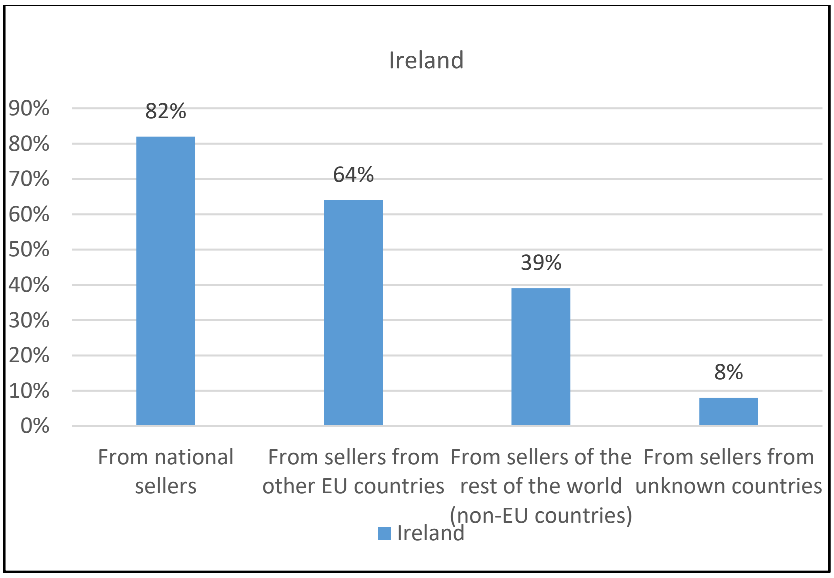
Figure 3-4 Frequency of Online Purchases (2021, Q4)



Source: Eurocommerce.eu, 2022.

According to the European e-commerce report (2022), online purchases in Ireland have shown a high percentage of national sales in the last three months, accounting for 82% of total online purchases. Meanwhile, purchases made from sellers in other European Union countries accounted for 64%, while sales from non-EU countries represented 39% of the total. It is worth noting that purchases from sellers of unknown countries accounted for a smaller percentage at 8%. These figures suggest that national online retailers are preferred over international ones, with most purchases being made within the EU. The data may reflect the familiarity and trust Irish consumers have in domestic retailers, and the preference for purchases made within the EU (Figure 3.5).

Figure 3-5 Online Purchasing Nationally and Cross-Border(2021, Q4)



Source: Eurocommerce.eu, 2022.

Byrne & Graham (2022) states that the country has returned to physical retail and that many members are implementing a multichannel strategy with both physical and online stores. There has been an expected decrease in e-commerce sales compared to 2021, as remaining retail restrictions have eased and physical stores have resumed regular trade. Although there is no stable variable regarding the decline, there is an average annual decrease between 10% and 25%. Online sales in Ireland show an average increase of 20% compared to pre-pandemic levels in 2019, and online retail continues to be a significant growth area for Irish retailers. Regarding this, Ireland's first Amazon distribution centre opened in Dublin in Spring of 2022. Covering almost 60,000 square meters and employing 500 people, this facility will undoubtedly change the e-commerce landscape in Ireland (Byrne & Graham, 2022).

To be able to sustain the success of their e-commerce practices, Irish businesses, and the government assess the effectiveness of their e-commerce strategies to identify areas for improvement. Although they are not unique to the country only, several performance measurements and indicators related to e-commerce have been put into practice in Ireland. Any kind of data regarding e-commerce sales, e-commerce penetration rate, website traffic of relevant webpages, conversion rates of websites, average order value, and customer satisfaction, as well as government reports and research findings, provide information on e-commerce performance measurements and indicators in Ireland (Statistica, 2023a; Eurocommerce.eu, 2022; Department of Enterprise, Trade and Employment, 2021b).

There are a variety of statistics and data available on e-commerce in Ireland that are encountered, analyzed, and compared in macro documents of the country. These are shared with national, regional and international entities, and can be useful for businesses and policymakers looking to better understand the Irish e-commerce market. These statistics, including online retail sales, number of online shoppers, types of products purchased online, payment methods, delivery and logistics, mobile commerce, and e-commerce trends are compiled and analyzed regarding e-commerce in Ireland.

E-Commerce has revolutionized the way businesses operate around the world. Ireland is no exception, as its national economy has been significantly impacted by the growth of e-commerce. The rapid rise of e-commerce has affected several sectors of the economy, including taxation, employment, custom service, logistic sector, and finance sector, which are explored in this section. With the increasing prevalence of online shopping, it is essential to understand the changes that e-commerce has brought to the Irish economy and how it will continue to shape the country's future. In Ireland, it is predicted that the revenue in the e-commerce market will reach 6.64 billion US dollars in 2023, with a compound annual growth rate of 11.23%. Based on this growth rate, the market volume is expected to reach 10.16 billion US dollars by 2027. The number of users is expected to reach 4.10 million by 2027, with user penetration expected to be 77.5% in 2023 and rise to 79.1% in 2027. The average revenue per user (ARPU) is expected to be 1,690 US dollars (Statista, 2023e).

According to Statista data, the fashion sector is the largest market in e-commerce in Ireland. The fashion sector accounts for 34.3% of Ireland's e-commerce revenue. In addition, other markets such as food and personal care (22.1%), toys, hobbies, and DIY (15.1%), furniture and appliances (14.3%), and electronics and media (14.2%) also have a significant share in Ireland's e-commerce sector. This growth in Ireland's e-commerce sector also contributes significantly to the local economy. The e-commerce sector helps businesses in Ireland to grow and create employment opportunities. Additionally, it provides consumers with a wider range of products and the ability to shop at competitive prices (Ecommerce Europe, 2022).

ICT Infrastructure

Ireland is committed to a fast-paced digital transformation. Availability of high speed, reliable digital connection, Ireland's economic and social aspects of its development. Ireland invests in digital connections characterized by excellent performance, security and sustainability, optimized to take advantage of the latest optical fiber technologies and take advantage of innovative wireless systems such as 5G. All Irish homes and businesses will be covered by a Gigabit network by 2028 at the latest, by 2030 at the latest, all populated areas will be covered by 5G, and by 2023 all Connected Hubs and all Schools will be digitally connected (DECC, 2022).

Taxation

Ireland is one of the countries that started implementing the EU Electronic Commerce Act in 2003. In 2015, the European Union launched the Digital Single Market Strategy, prioritizing e-commerce. While the EU VAT directive system is harmonized at the directive level across the EU, the implementation of VAT policy is partially harmonized, allowing EU member states to apply a minimum of 15% VAT. In addition, reduced rates or temporary exemptions can be applied to certain goods and services. Also, non-EU-based companies are subject to VAT in their commercial transactions. Mini One Stop Shop (MOSS) is a system that facilitates VAT payments for e-commerce businesses selling goods and services to customers in different EU countries. MOSS has been in use since 2015. Furthermore, with the new regulation that took effect on July 1, 2021, MOSS has been transformed into the One Stop Shop (OSS) system, which is valid in all EU countries (U.S. Department of Commerce, 2021).

According to the new VAT regulations, since July 2021, all goods coming from non-EU countries to Ireland have been subject to VAT. Before the onset of the Covid-19 pandemic, Irish consumers were spending €21 million online every day, with €14 million spent on orders fulfilled by businesses outside of Ireland. Many of these goods were from third countries and were therefore not subject to VAT. In practical terms, this meant that these goods could price themselves lower and put Irish businesses at a disadvantage. Introducing the new VAT regulations should encourage a shift towards online sales by Irish businesses, providing much-needed support to small businesses across the country as they emerge from the Covid-19 pandemic. Because many businesses have significantly invested in improving their e-commerce capabilities, the new VAT regulations should further incentivize Irish consumers to buy their goods and products from Irish websites (Campbell, 2022).

Employment

Many companies operating in the e-commerce sector provide employment for thousands of people in Ireland. These job opportunities have been particularly desirable for young people and those skilled in technology. E-commerce has made work more flexible in Ireland, allowing online sales and marketing activities to be made from home or remotely. This has encouraged workers to adopt a more flexible approach to work-life balance. Digital transformation, which is necessary for e-commerce, has helped businesses in Ireland develop their digital capabilities, innovate, and grow in areas such as digital marketing, data analysis, e-commerce platforms, and other digital skills. It has facilitated access to global markets and allowed Irish businesses to reach customers worldwide, thereby helping them to expand and reach a broader customer base (Department of Enterprise, Trade and Employment, 2020; Ireland Skills Development and Labor Market Research Unit, 2018).

Trade Facilitation and Logistic

Irish Customs Services have implemented various innovations to comply with e-commerce, including the digitization of customs declarations for individuals and businesses (Revenue Commissioners, 2023a), the use of online payment systems, and facilitation of tax declarations and payments for e-commerce websites (Revenue Commissioners, 2023b). In addition, Irish Customs Services apply a unique system called the "Irish VAT Special Arrangement" for VAT declarations and payments by e-commerce companies. This arrangement provides convenience for VAT payments, even for high sales volumes made by e-commerce companies in Ireland and enables certain goods to be imported free of Customs Duty, VAT, or both from outside the European Union (EU) (Revenue Commissioners, 2023c).

The factors such as Ireland's extensive and fast internet infrastructure, high technological adaptability, being an English-speaking country, and being a member of the EU facilitate the establishment of e-commerce companies in the country. In addition, Ireland's strong economy, strategic location, and worldwide technological innovations have led to significant developments in the e-commerce and logistics sectors in the country. The impact of e-commerce activities on the logistics sector has created a need for more transportation and storage, leading to significant growth in the logistics sector in Ireland. Ireland is home to many offices of the world's largest logistics companies. Specifically, Dublin, Ireland's capital city, is one of the largest logistics centers in Europe. The development of the e-commerce and logistics sector has created new business opportunities in Ireland and contributed to the country's economy. In addition, the Irish government has created policies and incentives to support the growth of these sectors (Department of Enterprise, Trade and Employment, 2020).

Finance and Payments

Over 40 years, global financial institutions have made Ireland their home, from international banks, investment managers, and insurers, to aircraft leasing operators and administrators. Jobs in the sector have grown 25% since 2015. Above 430 financial services companies operate in Ireland. Financial services operations in Ireland handle deposit taking, lending, compliance/AML, fund accounting, trade finance, investor relations, equities, FX sales, capital markets, portfolio management, technology support, software development, cybersecurity, and more. The Irish Government has prioritized the continued success of the financial services sector. Working in partnership with industry, academia, and key stakeholders, the state supports the sector's ongoing growth (IDA Ireland, 2023). The Bank of Ireland was established in 1783 by Royal Charter, and it is now one of the largest banks in Ireland. Allied Irish Banks, PLC , and Barclays Bank Ireland PLC are other important banks in Ireland (The Banks, 2023).

With respect to e-commerce payment methods in Ireland, card payments appear to be the most commonly used method, accounting for 60% of all payments made in this sector. Digital wallets are the second most popular method, with 21% of all transactions being made through this method. Bank transfer is another popular option, accounting for 9% of all payments. Meanwhile, cash payments, a traditional form of payment, are used in only 7% of all e-commerce transactions in Ireland. Other payment methods, such as mobile payments or cryptocurrencies, make up the remaining 3% of all transactions (Table 3.3). Overall, these findings suggest that card and digital wallet payments are the most commonly used forms of payment in the Irish e-commerce market.

Table 3-3 E-commerce Payment Method Split by Value

Payment method	Payment split (%)
Card	60%
Digital Wallet	21%
Bank Transfer	9%
Cash	7%
Other	3%

Source: (Morgan, 2019h)

3.1.1.3 Main Actors and Initiatives of E-commerce Environment

The e-commerce ecosystem in Ireland is a dynamic and diverse landscape, shaped by a range of actors and initiatives. These actors include businesses, consumers, government agencies and organizations, and industry associations.

Department of Enterprise, Trade and Employment (DoETE):

Ireland has a different model of state administration system. There are 18 departments that ministers are responsible for, and the Department of Enterprise, Trade and Employment is one of the 18 departments. There are also 230 Agencies and 31 regional authorities(Gov, 2023). **DoETE** is managed by 3 Ministers: Minister for Enterprise, Trade and Employment, Minister of State for Business, Employment and Retail and Minister of State for Trade Promotion, Digital and Company Regulation. (Enterprise, 2023a) and its responsible for the implementation of policy in eight key areas (Enterprise, 2023b):

- Enterprise Innovation
- Trade & Investment
- Supports for SMEs
- The Business Environment
- Workplace & Skills
- EU & Internal Market
- Company & Corporate Law
- Consumer & Competition

As can be seen from its fields of activity, the basic areas related to E-commerce are under the responsibility of DoETE and it is one of the highest bodies in the creation and development of the ecosystem related to E-commerce, as included in the E-Commerce Act that came into force in 2000.

Under the Trade and Investment section of DoETE, there are Intellectual Property Office of Ireland, IDA Ireland (Related with FDI) and Enterprise Ireland structures (Enterprise, 2023c).

Enterprise Ireland: Enterprise Ireland is a government organization tasked with facilitating the advancement and expansion of Irish enterprises in international markets. Ireland's global economy, being one of Europe's fastest-growing digital economies, has helped the country increase its foreign trade through e-commerce. The Irish government established Enterprise Ireland, which is responsible for implementing development strategies set by the government and the European Commission. The main goal is to create a network of collaboration with Irish businesses and generate various export sales in the global market through digital transformation programs (Enterprise Ireland, 2023a). Through these efforts, Enterprise Ireland fosters sustainable economic growth, regional development, and job security. Its mission is to drive innovation and competitiveness in Irish businesses, helping them start, grow, and scale in global markets. Enterprise Ireland provides various support and services to Irish companies, including financial assistance, mentoring, training, and access to international networks and markets. The agency also works to attract international businesses to Ireland and to promote Ireland as a location for foreign direct investment (Enterprise Ireland, 2023b).

As for the practices employed and business enterprises on e-commerce in the country, a game-changing initiative for Irish retailers was the Covid-19 Online Retail Scheme, a government grant managed by Enterprise Ireland to help businesses grow their online presence. This much-needed state support had a significant impact on the e-commerce market in Ireland, enabling retailers to expand and thrive online. So far, four rounds of funding have been awarded, providing up to €40,000 per retailer in each round. The program was open to Irish-based retailers with a physical store and an existing online presence employing ten or more people. In 2021, the fourth round provided €5 million in funding, and the fifth round opened for applications in 2022 for small businesses with up to ten employees. Additionally, there is a group of retailers with less than ten employees who have significant online potential but are known to have received inadequate support. Retail Excellence, a not-for-profit industry body representing the retail industry in Ireland and actively engaging in addressing this issue understands the value of additional support for such businesses through agreements with the government (Byrne & Graham, 2022).

eiLearn: Ireland launched an online learning platform called *eiLearn.* EI (Enterprise Ireland) Learn is an online learning portal developed by Enterprise Ireland, the Irish government agency responsible for supporting the development of Irish businesses. The platform provides access to a range of courses and resources designed to help entrepreneurs and business leaders develop their skills, grow their companies, and spread digital transformation across the country. The courses available on eiLearn cover a broad range of topics on commerce, including business planning, innovation, leadership, and export development. Many of the courses are free, while others may have a small fee associated with them. All of those initiatives have a positive impact on the e-commerce activities of the country (EiLearn, 2023).

E-Commerce Association Ireland (eCAI): The eCAI is an independent and non-profit organization staffed by a team of committed e-commerce professionals devoted to advancing Ireland's e-commerce industry. Its purpose is addressing a previously unmet need. The overwhelming response to the organization's formation demonstrated the necessity of its existence. All of its work to date has been accomplished through the efforts of volunteers and donations from companies. In 2019, the decision was made to fully monetize the association in order to support full-time staff and premises. The development of the Business Network Platform was central to the organization's development strategy. However, despite these changes, the eCAI remains an independent, non-profit entity dedicated to advancing e-commerce and growing its community (eCAI, 2023). eCAI creates an information-sharing platform on experience, innovation, environment, payments, logistics, and marketing. They contribute to e-commerce with interviews, video lectures, and articles.

Digital Business Ireland (DBI): Founded in 2019, DBI is a not-for-profit organization representing over 8,000 businesses across diverse sectors, including technology, retail, hospitality, professional services, travel, transport, education, leisure, agri-business, and property. In addition, DBI boasts a network of affiliate members, such as Health Stores Ireland, the Association of Fine Jewellers, Donegal Women in Business Network, County Kildare Chamber of Commerce, Women’s Inspire Network, the Institute of Professional Auctioneers and Valuers, Digital HQ, Dún Laoghaire, and The Coach Tourism and Transport Council of Ireland. DBI offers cutting-edge training, insights, and events to its network and se benefits enable businesses to thrive and achieve their digital ambitions. Furthermore, DBI collaborates with companies that align with the organization's core interests and provide value propositions to its membership (Digital Business Ireland, 2023).

In addition to the ones listed, there are also some informative websites with regard to e-commerce and other related information which are publicly accessible for consumers and companies. The language of all resources is English and there is also Gaeilge option on the CSO and data.gov.ie websites. Some information sources are given as a sample below but the list is not limited to those.

Data Providers

Weare.ie: Weare.ie. is its utilization of the internet for the betterment of its society and economy. As the designated national registry for .ie domain names, the organization offers a dependable pathway to the Internet for Irish individuals, communities, and enterprises. By means of conducting original research and providing valuable insights, Weare.ie. informs and enables policymakers and partners to promote the growth of Ireland's internet ecosystem, which in turn contributes to the success of all online participants in the country. Furthermore, Weare.ie.'s annual Digital Town initiative recognizes and promotes the digital achievements of a town, celebrating its progress in the online realm (We Are, 2023). Strengthening the internet ecosystem is one of the first steps to strengthening the e-commerce structure. As of 2023, the global internet penetration rate is 64.4% of the population. However, in Ireland, this situation is remarkable, as 99% of the population has access to the internet. The rate, which was 82% in 2017, has been increased to 99% in 2023 (Datareportal, 2022; Datareportal, 2017). The applications made by weare.ie in this regard are noteworthy.

The Central Statistics Office (CSO): The Central Statistics Office (CSO) serves as Ireland's national statistical office, with promotes innovation and fair competition. The central portal for accessing all open governmental data in Ireland is Data.gov.ie. This platform offers easy access to datasets that are free to use, reuse, and redistribute. Data.gov.ie is operated by the Government Reform Unit, which is a part of the Department of Public Expenditure and Reform (Data, 2023).

There are more than 160 institutions providing data to Data.gov.ie, including public institutions, private institutions (such as banks, insurance companies, etc.), commissions, and councils. As of April 2023, the platform hosts 14,845 datasets (Data, 2023). Although there are datasets from various fields, it is possible to access data that allows information sharing about e-commerce and evaluates sectors. This data platform, created by the Irish government, integrates all institutions and guides e-commerce entrepreneurs.

Consumer Protection Commission (CCPC): In efforts to protect consumers' rights in online shopping, and there is a webpage, "https://www.ccpc.ie" where information on complaint procedures and the ability to file complaints are provided. This site has separate information areas for consumers and companies (Competition and Consumer Protection Commission, 2023).

3.1.1.4 Policies, Regulations and Standards

It is important for businesses operating in the e-commerce sector to stay up-to-date with any changes in national regulations that may affect their operations. They should regularly check the relevant and reliable sources to ensure they are informed about any new requirements or restrictions that may impact their business. Several communication systems and channels are in place to notify changes in national regulations concerning the e-commerce system in Ireland. These may include, but not limited to the Irish government's official website (www.gov.ie), regulatory agencies such as the Competition and Consumer Protection Commission (CCPC) and the Data Protection Commission (DPC), industry associations such as the Irish Internet Association (IIA) and the Irish Business and Employers Confederation (IBEC), legal firms specializing in e-commerce law like Matheson, McCann FitzGerald, and news sources including online news sites and newspapers which regularly report on new regulations affecting e-commerce in Ireland (Timon, 2022).

Although Ireland does not have a specific national e-commerce strategy accessible, Ireland's approach to e-commerce is focused on creating a supportive ecosystem for digital businesses to grow and innovate through policies and initiatives that promote digital skills development, infrastructure investment, and business support services. To this end, there are several initiatives and policies in place to support and promote e-commerce growth in the country. One of the key elements of Ireland's approach is its commitment to the EU's Digital Single Market strategy, which aims to create a level playing field for digital businesses and remove barriers to cross-border ecommerce within the EU. Additionally, Enterprise Ireland, the government agency responsible for supporting Irish businesses, has several initiatives in place to help SMEs develop their e-commerce capabilities, including the Online Retail Scheme and the Covid-19 Online Retail Scheme. Ireland has also implemented the EU's General Data Protection Regulation (GDPR) to govern the collection, use, and storage of personal data by e-commerce businesses. Furthermore, Ireland's tax system is designed to attract e-commerce businesses, with a low corporate tax rate and various tax incentives for research and development, innovation, and start-ups. The Irish government is also investing in the rollout of high-speed broadband infrastructure, which is essential for supporting e-commerce growth in rural areas and smaller towns. Finally, there are several initiatives in place to support innovation and R&D in the digital economy, including the Disruptive Technologies Innovation Fund and the Horizon 2020 program (Timon, 2022).

As for legal and administrative frameworks in Ireland, it is seen that e-commerce is subject to the same laws and regulations as non-electronic businesses, such as the Scale of Goods Act 1893 and the Scale of Goods and Supply of Services Act 1980. However, there are specific laws that apply to e-commerce transactions, including EU directives and Irish implementations of such directives. The Electronic Commerce Act 2000 governs the conduct of online businesses and introduces the use of electronic signatures. The European Communities (Directive 2000/31/EC) Regulations 2003 further regulate online contracts. The Eidas Regulation ((EU) 910/2014) ensures the safety and legality of electronic signatures and transactions. The General Data Protection Regulation ((EU) 679/2016) and the Data Protection Act 2018, which transposes its provisions into Irish law, also apply to e-commerce transactions. Additionally, Ireland is subject to the Geo-Blocking Regulation ((EU) 2018/302), which prohibits traders from restricting website access based on geo-factors such as location or IP address. Finally, the European Union (Copyright and Related Rights in the Digital Single Market) Regulations 2021 transposed the Copyright Directive ((EU) 2019/790) into Irish law, aiming to make copyright laws relevant to the digital age (European Union, 2014;2016;2018;2019).

The Consumer Rights Act 2022 is undoubtedly one of the most significant legislations affecting businesses and consumers in Ireland. The bill strengthens existing consumer rights by providing renewed protections for digital goods and services while offering a renewed focus on digital services and content. The legislation reflects the exponential growth initiated by the Covid-19 pandemic in many ways, including the e-commerce market. As consumers increasingly purchase goods online, the e-commerce market is growing, and Irish legislation has had to reflect this trend. Under the bill, consumers will be provided with rights and protections regarding streaming, downloading, and cloud products. Some of these rights include the right to a full refund, as well as the right to have the online product (or service) replaced or repaired when it does not meet its intended purpose. During Covid-19, businesses in Ireland have taken extraordinary steps towards transitioning to the online environment, and as a direct result, consumers have become accustomed to the convenience of online shopping. Therefore, it has become crucial for the Irish government to take steps to adequately protect consumers while providing consistent guidelines for businesses engaged in online commerce. These new measures will also help to strengthen Irish traders looking to compete in the global marketplace (Campbell, 2022).

Apart from legislation, there are parties responsible for enforcing those laws in Ireland. Customs and tax authorities, as well as other law enforcement agencies, play a crucial role in enforcing e-commerce related regulations, as well. In the European Union (EU), the role of customs authorities in cross-border e-commerce transactions has been highlighted as particularly significant due to their responsibility for enforcing customs duties, taxes, and trade compliance regulations. Customs officials are responsible for monitoring the flow of goods in and out of the country to ensure that they comply with regulations related to labelling, safety, and intellectual property. They also have the authority to inspect and seize goods that violate these regulations. In addition to customs, other law enforcement agencies in Ireland, such as the police, are responsible for investigating and prosecuting illegal activities related to e-commerce, such as cybercrime, identity theft, and online scams (Daly & Murphy, 2017).

In Ireland, e-commerce quality standards are applied by a set of regulations and rules. For example, in Ireland, there are a set of standards and rules established by the Consumer Rights Directive (2011/83/EU) and the European Communities (Protection of Consumers in Respect of Contracts Made by Means of Distance Communication) Regulations 2001 to protect consumer rights in distance contracts. These standards include providing customers with accurate and complete product descriptions, simple and transparent order processes, and easy procedures for product returns (O'Connor & Crowley, 2019).

In addition, the European Union Agency for Cybersecurity (ENISA) has established a set of standards to improve user experience and security in e-commerce sites. These standards include detailed rules and guidelines on issues such as the security of user data, encryption, and authentication systems. Various organizations and agencies are responsible for enforcing these standards. For instance, the Digital Ireland Unit, operated by the Irish government, provides various resources and supports to help e-commerce businesses comply with high standards in digital marketing, data security, and customer service. The National Standards Authority of Ireland (NSAI) also plays a role in developing and enforcing various quality standards (O'Connor & Crowley, 2019).

Irish businesses and the government are committed to sustaining the success of their e-commerce practices through ongoing assessments of their strategies to identify opportunities for improvement. A range of performance measurements and indicators related to e-commerce have been implemented in Ireland, although these are not unique to the country. Various data sources are utilized to evaluate e-commerce performance, including sales figures, e-commerce penetration rates, website traffic statistics, website conversion rates, average order values, and customer satisfaction levels. These performance indicators are drawn from a range of government reports and research findings, such as those from Statista, the Central Bank of Ireland, and the Department of Enterprise, Trade, and Employment.

Bilateral and regional agreements, and international treaties are also regarded among the main factors to be analysed as macro documents. Ireland has signed bilateral agreements related to e-commerce with countries such as the United States and Canada. These agreements cover a range of issues, including data protection, intellectual property, and online trade (US Department of State, 2020; Department of Foreign Affairs and Trade, 2017).

As for regional agreements, Ireland is a member of the European Union (EU), which has established regulations and directives related to e-commerce. For example, the EU has adopted the e-commerce Directive, which sets out rules for online service providers and regulates issues such as online advertising, electronic contracts, and liability of intermediaries (Chong & Chao, 2006; Morgan, 2023). There are also various international treaties and agreements that are relevant to e-commerce to which Ireland is a signatory. Two of those are the World Trade Organization (WTO) agreements and the United Nations Convention on the Use of Electronic Communications in International Contracts. These agreements aim to promote free trade and remove barriers to e-commerce, among other goals (US Department of Commerce, 2023; Privacyshield, 2023).

In addition to agreements and treaties, there are other good data sources of national and international applications in establishing, sustaining and controlling e-commerce business in Ireland. For example, the Central Statistics Office (CSO) is Ireland's national and official statistical agency. Its main role is to collect, compile, and disseminate accurate and reliable statistical information on various aspects of Irish society and economy. CSO presents up-to-date data on e-commerce in Ireland on its website and plays a crucial role in helping Ireland to understand and respond to social, economic, and demographic changes and to make informed decisions for the benefit of its citizens (The Central Statistics Office, 2023b).

3.1.1.5 Conclusion of Review

The COVID-19 pandemic has accelerated the digital transformation process in Ireland, particularly in e-commerce. The restrictions on physical stores and the increase in the amount of time consumers spend at home have led to a rise in online shopping. Here are the highlights from the Ireland desk research for a successful e-commerce environment:

- Internet access is a crucial factor in e-commerce, and Ireland's weare.ie platform has made the internet accessible for almost the entire population, which is significantly higher than the global average. This is noteworthy because it is impossible for businesses and users who do not have internet access to shop online, especially for businesses to start in e-commerce.

- Traditional businesses require various equipment, software, and human resources to move their operations online, which can be strengthened and speeded up with government support. As a result, businesses will be encouraged to move towards e-commerce. The Irish government's "Covid-19 Online Retail Scheme" program has helped businesses succeed in e-commerce.

- Tax regulations aimed at protecting local vendors have created a price balance between domestic and foreign markets. In addition to regulations that protect local vendors, a campaign called Click Irish has been launched, which indexes genuine local vendors to support them. The campaign aims to raise awareness among Irish people about the importance of supporting the local economy by shopping from local vendors. It emphasizes strong communication with these vendors, as well as simple logistics, returns, and exchanges.

- The Irish government has placed emphasis on data science, bringing together reliable public and private organizations to create a platform that provides data to all commercial businesses. This situation supports businesses in their decision-making processes. Businesses in Ireland have a cost advantage for market research when they have reliable data about the local market.

- Running an e-commerce business requires expertise in various fields such as software, graphic design, video-animation, photography, digital marketing, and social media management. While it is not necessary for every e-commerce business to specialize in all these areas and create job opportunities, many service businesses have emerged that offer support in these areas to help e-commerce businesses succeed. Production companies that regularly take e-commerce photos and videos, marketing agencies that manage digital marketing processes, and media agencies that manage social media are some examples of these businesses. At this point, it is essential for businesses to have knowledge in managerial terms. This issue has been taken seriously in Ireland, and many institutions have developed education-focused content. Especially eiLearn, developed by the government, creates opportunities for businesses in digitalization.

- Upon evaluating all the studies conducted, it has been determined that the Irish government has succeeded through its subsidiary organizations that work towards implementing strategic plans. These institutions have been supported by the government and have focused on e-commerce, which has accelerated the development of e-commerce in the country. It has been observed that the B2C structure is more advanced compared to B2B and B2G. It is recommended that Ireland develop policies that support B2B and B2G or improve existing policies to strengthen the local market.

While efforts and regulations to strengthen the local market have been observed, a greater motivation is deemed necessary to reach foreign markets.

The continuity and continuous development of these elements, which stand out in Ireland's success in e-commerce, is very important. As technology, expectations and needs are constantly changing and international competition is increasing rapidly, it is necessary for the administrations to continue research and programs to develop the e-commerce ecosystem in the country without slowing down.

3.1.2 Azerbaijan

3.1.2.1 Background

Azerbaijan is a country located in the South Caucasus region of Eurasia. It is bordered by Russia to the north, Georgia to the northwest, Armenia to the west, Iran to the south, and the Caspian Sea to the east. Azerbaijan is a secular country with a diverse population. Azerbaijan's total population was 10.39 million in January 2023 (Kemp, 2023). Azerbaijan's economy is characterized by the fact that the extraction, processing, and export of national economy. Azerbaijan was one of the key industrial hubs of the USSR during its historical era because it supplied more than 70% of the chemicals used in the Soviet economy (Veliyev et al, 2022) and it is a major producer of oil and gas, and these industries account for a significant portion of the country's GDP. Azerbaijan's economy is driven by the oil and gas sector, which accounts for around 90% of the country's exports and 30-50% of its GDP, depending on oil prices. The dynamics of the oil and gas sector influence economic growth considerably, both through industrial activity and consumer spending linked to employment and salaries. Agriculture provides 5.2% of GDP, but still almost 40% of all jobs (IEA, 2021). Ayyubova (2023) analyzed the impact of global oil prices on Azerbaijan's GDP and found that fluctuations in oil prices have a significant impact on the national economy. This highlights the need for Azerbaijan to diversify its economy and reduce its dependence on oil. The quality of Azerbaijan's transition process from a command economy to a market economy is another crucial aspect of its economic outlook. Niftiyev & Ibadoghlu (2022) argue that poor economic diversity and the dominance of the oil sector have hindered the country's institutional quality and long-term sustainable growth. The authors emphasize the importance of addressing these challenges to ensure a more balanced and diversified economy. However, the Azerbaijani economy continued to develop significantly in the first quarter of 2022, with GDP increasing by 6.8%, the non-oil sector increasing by 10.3% (Hasanli, 2022). The real total GDP in Azerbaijan is expected to grow by 3.5% in 2023 and 3.8% in 2024 (ADB, 2023). The rebound in economic activity in 2021 continued in the first half of 2022, fueled by strong activity in non-energy sectors. Recovering domestic demand supported growth, while high global energy prices boosted external and fiscal accounts (World Bank, 2023m). Azerbaijan is located on the Silk Road, which provides it with a strategic advantage in terms of e-trade. According to the State of E-Commerce in Azerbaijan report by Statista, revenue in the eCommerce market is projected to reach 1,8 billion US Dollars in 2023 (Table 3.4), and in the eCommerce market, the number of users is expected to amount to 3.96m users by 2027 (Table 3.5).

Table 3-4 Revenue estimation of e-Commerce in Azerbaijan (in million USD)

	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Beauty, Health, Personal & Household Care	161.90	196.60	202.60	229.30	275.40	325.80	351.40	382.50
Beverages	15.83	26.0ca	24.87	26.71	30.84	35.98	38.78	41.94
Electronics	602.60	726.00	675.80	740.20	845.30	953.40	1,008.00	1,071.00
Fashion	341.10	473.40	425.40	490.40	587.40	708.00	763.50	832.50
Food	86.26	124.60	136.30	160.00	199.20	247.10	270.60	299.20
Furniture	38.58	49.92	46.78	55.49	66.83	80.54	87.36	95.64
Media	27.15	29.35	26.61	25.24	24.89	24.40	24.58	24.58
Toys, Hobby & DIY	102.40	133.10	130.90	139.30	157.30	178.90	190.20	203.20
Total	1,376.00	1,759.00	1,669.00	1,867.00	2,187.00	2,554.00	2,734.00	2,950.00

Source: (Statista, 2023a)

Table 3-5User Estimation of e-Commerce in Azerbaijan (Million Users)

	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Beauty, Health, Personal & Household Care	1.30	1.44	1.54	1.64	1.72	1.80	1.88	1.96
Beverages	0.73	0.82	0.91	1.00	1.06	1.13	1.20	1.27
Electronics	2.00	2.24	2.47	2.67	2.83	2.99	3.17	3.33
Fashion	1.94	2.13	2.32	2.48	2.62	2.76	2.91	3.04

	2020	2021	2022	2023	2024	2025	2026	2027
Food	0.68	0.77	0.86	0.94	1.00	1.06	1.13	1.20
Furniture	0.91	1.07	1.23	1.37	1.48	1.59	1.72	1.84
Media	1.40	1.54	1.67	1.79	1.89	1.99	2.08	2.17
Toys, Hobby & DIY	1.57	1.83	2.09	2.30	2.48	2.66	2.86	3.05
Total	3.29	3.48	3.63	3.73	3.79	3.85	3.91	3.96

Source: (Statista, 2023b)

3.1.2.2 E-Commerce and its impacts to Azerbaijan

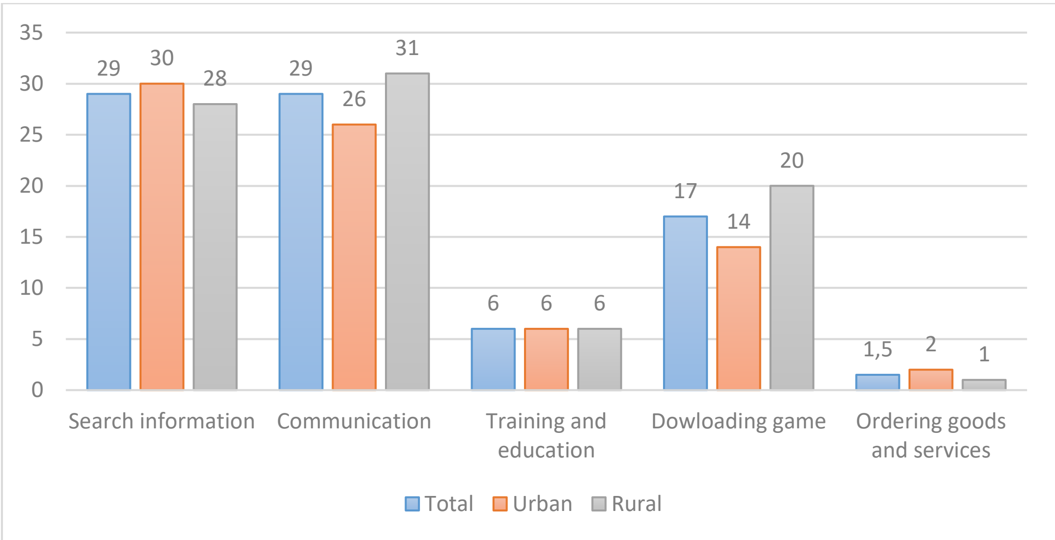
The process of digital transformation in contemporary society has been hastened by the quickening pace of science and technology development. One of the major forces behind the socioeconomic development of nations, digitization has made it possible for substantial changes to be made in the way that trade and commerce are organized as well as for electronic commerce to play a significant role in the worldwide market for goods. E-commerce's more dynamic development is a result of the global digital transformation process' acceleration. The potential for online trade is expanding as a result of this process, which is fundamentally changing the interaction between buyers and sellers worldwide (Kostin & Suboch, 2020). In 2022, 260550 E-commerce Transactions were made and the total expenditure is 18,348,000 Manats. In 1018, this transaction amounted to 26,128 transactions and 1490,000 Manats. It is observed that there has been an increase of approximately 10 times in 5 years. (Central Bank, 2023) General economic data on e-commerce in Azerbaijan is limited to this (Ministry of Economy, 2023; KOBİA, 2023). It should be mentioned that the administration of economic and business processes on the basis of contemporary ICT is a worldwide phenomenon with national and regional features, both conceptually and from the point of view of implementation. All facets of society have already been affected by ebusiness and e-commerce's growth of the economy. With the launch of the "Digital Trade Hub" portal in Azerbaijan (Digital Trade Hub, 2017), the necessary steps are being done to improve the nation's standing and increase its international commercial activities. The fact that Azerbaijan is one of the pioneers of cross-border trade in the Asia-Pacific region contributes positively to the strengthening of its standing on the international stage. It should be highlighted that Azerbaijan leads the region of Southern and Eastern Europe, the Caucasus, and Central Asia, scoring 86% overall in the United Nations' Global Report on Digital and Sustainable Trade Facilitation for 2021. The transparency measure saw the biggest increase, up to 7%, in 2021 when compared to 2019. Cross-border paperless trade has increased by 33% in Azerbaijan, according to the report's indication. In the report, the current situation of the country is compared with previous years. The report details the reforms that have led to progress (ESCAP, 2021). E-commerce in Azerbaijan 2017, only 5% of customers in Azerbaijan purchased something via the internet, compared to a world average of 24%. However, it should be said that the government is on the right track with the right investments. Despite being in an early stage of development, e-commerce sales growth in the EaP (EaP-The Eastern Partnership is a joint initiative involving the EU, its Member States and six Eastern European Partner countries: Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine) is expected to surpass the European average, with Azerbaijan reaching 4.6% growth in 2022 (OECD, 2022).

When the current situation of e-commerce in Azerbaijan is analyzed, it is revealed that the volume of purchases from foreign e-commerce sources is higher (Hajiyeva, 2021). The main reason for this is the wide product range and low prices of the tech giants. Although there are domestic e-commerce sites, their turnover is much lower than international e-commerce portals, and most of them are sites that serve more than shopping. These service sites like insurance, food delivery, courier services, travel, etc. Trendyol, which operates as an e-commerce platform and technology company, has signed a partnership agreement for the Azerbaijani Sunday with Baku-based Pasha Holding. Within the scope of the agreement, Trendyol and Pasha Holding will establish a company that will carry out joint e-commerce activities in Azerbaijan. It can be said that this initiative will make significant contributions to the development of e-commerce in Azerbaijan (Trend.az, 2023). The United Nations Conference on Trade and Development (UNCTAD) calculates the e-commerce development index to determine the level of development of e-commerce in different countries. For 2022, this index is calculated based on 193 countries and Azerbaijan is 83nd in this list (UN, 2022a). Studies have demonstrated that identifying issues with the development of contemporary electronic commerce technologies and systems and developing solutions for those issues will play a special role in enhancing the nation's economy (Cumming et al., 2023). One way to promote economic growth and development is to ensure that e-commerce systems are integrated, construct an efficient e-commerce mechanism, and jointly use relevant innovations with big data and other Industry 4.0 platform elements. The implementation of cutting-edge ICT technologies in the post-coronavirus age will open up new possibilities for future improvements in the effectiveness of e-commerce platforms in the Azerbaijani Internet market (Aliyev et al., 2023).

ICT Infrastructure

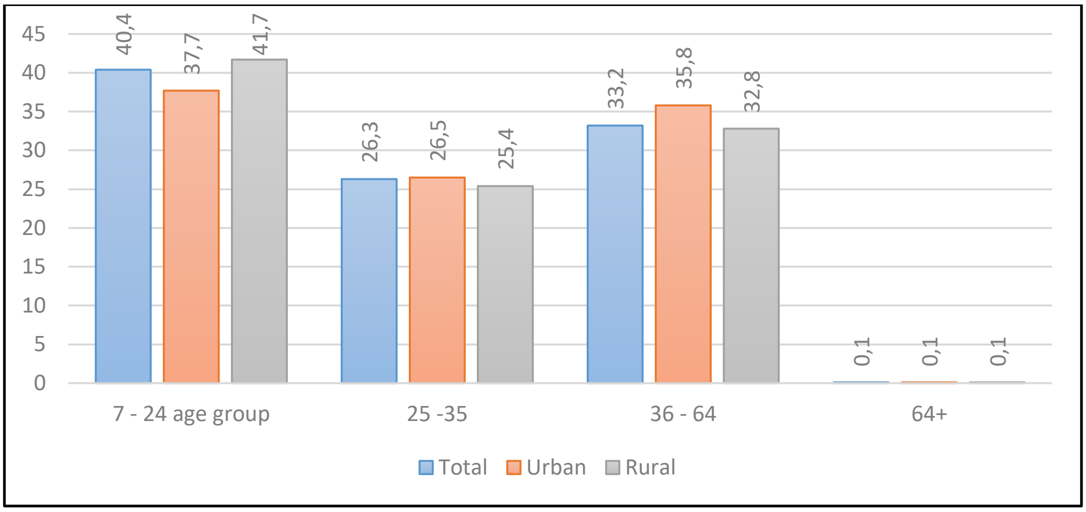
The ICT sector is the second sector to get state support after the oil and gas sector since the government of the republic views it as the second most important for the growth of the economy. In this regard, the government is implementing a number of state programs related to the advancement of information and communication technology; nevertheless, these programs lack organization. The level of government support for the industry is considerable, however, and overall, both the technological foundation of ICT and the level of society's general digitization are at a high level (Guseynov et al., 2021). The number of Internet users in Azerbaijan in 2019 was 7,991,630, which was 78.8% of the population. Although the number of Internet users is large, most people use it for entertainment and information purposes (Figure 3.6 and Figure 3.7). The smallest group includes those who shop online. The main causes of this are that the majority of Internet users are young people who do not actively engage in buying and selling as well as the fact that people do not have an e-commerce habit.

Figure 3-6 Purposes of Internet Use in 2018(%)



Source: Hajiyeva, 2021

Figure 3-7 Distribution of Internet Users by Age Groups in 2018(%)



Source: Hajiyeva, 2021

According to DataReportal, there are **8.93 million internet users** in Azerbaijan as of January 2023 and it means that over 80% of the population of Azerbaijan has access to the internet (Kemp, 2023). With the introduction of 3G services in 2009, mobile broadband subscriptions expanded. 5G technology is not available in the whole country today, but, according to planned government programs, the 5G technology will be available after 2023 (Doyar et al., 2023). According to the Association of Mobile Operators (GSMA) the mobile phone network covers 98% of the population of Azerbaijan and the mobile phone network is also very reliable, with a high uptime. As of March 2023, there are over 649,000 households in Azerbaijan that have access to fiber-optic internet. This is about 62% of all households in the country (Trend.az, 2022). The fiber cable infrastructure in Azerbaijan is being developed by a number of companies, including AzerTelecom, Bakcell and Nar.

Research shows that the number of devices connected to the Internet will also increase. For instance, the Association of Mobile Operators (GSMA) predicts that by the end of 2023 world reach 1.5 billion 5G connection, %60 4G adoption and 8.5 billion mobile connection (GSMA, 2023). It should be noted that digitalization and building a digital economy raise the issue of forming a sustainable ICT infrastructure in Azerbaijan. It is crucial to build new technology infrastructure, enhance services related to international relations, and develop a strong technological foundation so that more people may use it. The "Azerbaijan Digital HUB" program, which will eventually become the Regional Digital Center of Azerbaijan, is beginning to be implemented. AzerTelecom, the primary Internet service provider and a division of Bakcell, the country's first mobile carrier, is in charge of the Azerbaijan Digital HUB program, the creation of a sustainable infrastructure being its main goal. In this direction, efforts are being made to build a technology infrastructure both domestically and internationally (Abasova and Huseynova, 2021).

The digital hub project is part of Azerbaijan's efforts to adapt to the Fourth Industrial Revolution and leverage technological advancements for economic development. The project aims to foster the application of information and communication technologies, digitalization, and technological innovations in various fields (Xəlilzadə, 2023). One of the key components of the digital hub project is the establishment of Techno parks, which serve as centers for innovation, research, and development. These parks provide a conducive environment for startups, entrepreneurs, and researchers to collaborate, exchange ideas, and commercialize their innovations (Hasanov and Akbulaev, 2020). Furthermore, the digital hub project aligns with Azerbaijan's goal of diversifying its economy and reducing its dependence on oil and gas resources. By promoting digitalization and technological advancements, the country aims to develop new sectors and industries, such as information technology, telecommunications, and digital services (Humbatova et al., 2023).

The "Digital Silk Way" project, the implementation of this project will position Azerbaijan as a central node within the telecommunication corridor, enabling the transfer of digital content and Internet services from major European Internet centres to Asian nations via Azerbaijan. Project is not only of strategic importance to the regional countries, but it also fulfills the transit requirements between Europe and Asia via Azerbaijan. This significance was acknowledged when the project was selected as one of the top five strategic infrastructure projects in Asia at the "Global Strategic Infrastructure Leadership Forum" in the United States (Adh.az, 2023).

At the start of 2023, In Azerbaijan median mobile internet connection speed via cellular networks: 34.60 Mbps. Median fixed internet connection speed: 26.95 Mbps and there were 11.92 million cellular mobile connections (Datareportal, 2023). According the Ministry of Digital Development and Transport more than 649,000 households across Azerbaijan covered by fibre-optic networks in 2022 (Commsupdate, 2022). The development of fiber cable infrastructure in Azerbaijan is a major step forward for the country's economy. It will help to improve the quality of life for citizens and businesses, and it will make Azerbaijan more attractive to foreign investors. The development of fiber cable infrastructure in Azerbaijan is a major step forward for the country's economy. It will help to improve the quality of life for citizens and businesses, and it will make Azerbaijan more attractive to foreign investors.

It is another institution working on E-Commerce, a sub-measure within the scope of the Economic Development Program of the Ministry of Digital Development and Transport. Data privacy, Cyber security, ICT infrastructure are provided by this ministry. While the plan does not include the expansion of 5G, there is a target of Min 25 mb internet and fiber infrastructure in the whole country by 2024(MODDT, 2023).

Taxation

State Tax Service under the Ministry of Economy of the Republic of Azerbaijan is a central executive body that ensures the implementation of tax policy, timely and full collection of taxes and other revenues to the state budget and that exercises state control in this area within the framework of a unified financial and budgetary policy in the country. After the adoption of the Tax Code, a number of decisions were made to carry out scientific research on the training, retraining and professional development of tax officials, and on the formation, enhancement and legal support of the tax system. The VAT rate in Azerbaijan is 18%, Corporate income tax (CIT) rate is %20 and Personal income tax (PIT) rate is %25 (PWC, 2023b) .

At present Azerbaijan has signed international treaties with 55 countries on the avoidance of double taxation and 51 of them are in force (PWC, 2023a). State Tax Service has close cooperation with Association of Tax Authorities of Islamic Countries (ATAIC), Economic Cooperation Organization (ECO), Black Sea Economic Cooperation Organization (BSECO), Organization for Economic Co-operation and Development (OECD), Inter-American Center of Tax Administration (CIAT), Intra-European Organization of Tax Administrations (IOTA), International Tax and Investment Center (ITIC). At the same time, international cooperation is developing rapidly with financial institutions such as the International Monetary Fund, the International Finance Corporation, the World Bank and others. Reforms carried out by State Tax Service contribute to achieving high rates in international rankings. In Doing Business 2020 report which includes an assessment of the World Bank's business environment, Azerbaijan 34th place among 190 countries (World Bank, 2020a).

The informality of e-commerce companies is a very important problem. This problem creates a problem both in competition and taxation. Electronic payments are very scarce in Azerbaijan. The Government of Azerbaijan supports electronic payments for consumers, and consumers who make electronic payments receive back 17.5% of the VAT they paid (KOBİA, 2023) Startup companies can also be e-commerce companies. These companies are not taxed for 3 years (KOBİA, 2023).

Employment

Azerbaijan has the lowest unemployment (6.58%) rates in 2021 in the Southern Caucasus (Doyar et al, 2023). In Azerbaijan there were 6939 business entities functioning in the ICT industry in 2020, of which 95.2% were micro, 3.2% were small businesses, and 1.6% were medium-sized businesses (Stat., 2022). The majority of medium-sized businesses were state-owned, although private enterprises predominated in the micro and small company sectors. The vast majority of foreign and jointly held businesses were small businesses.

In general, state-owned businesses employed 47.2% of the workforce, while non-state businesses employed 52.8%. The medium-sized businesses in the ICT sector are those that create the most value. Thus, the total value added produced by businesses in the sector in 2020 was 466.9 Million Manats, with medium-sized businesses accounting for 61.4% (286.9 Million Manats), small businesses for 23.5% (109.6 Million Manats), and micro businesses for 15.1% (70.4 million Manats) (Fataliyeva, 2022). According the State Statistical Committee of The Republic of Azerbaijan, country had 62.400 ICT sector workers in 2021 (Stat., 2021).

It is obvious that one of the most important problems arises from IT trained personnel. Scholarships are given in 2 Ministries to train 6000 ICT experts (ASK, 2023). Since 2022, 100-120 E-Commerce graduate students are trained annually in Azerbaijan University of Economics. Trainings are given to entrepreneur candidates and companies for e-commerce. Free training and seminars on displaying products on platforms such as Amazon are of particular interest. Students want to do internship at Azexport and learn about this process. This training is given to approximately 1000 people a year, and then 50 people are mentored (Azexport, 2023a).

Trade Facilitation and Logistic

In Azerbaijan Customs clearance was streamlined in May 2016 through an e-declaration system (Customs, 2023a). Azerbaijan subscribes to the Madrid Agreement and the Madrid Protocol's treaties on International Registration of Marks, the 1999 Geneva Act of The Hague Agreement Concerning the International Registration of Industrial Designs, and the Patent Cooperation Treaty. Azerbaijan became the 150th country to become a member of the World Trade Organization (WTO) on May 21, 2005. Therefore, international WTO regulations are also followed at customs.

Azerbaijan is positioning itself as a logistics hub for East-West trade in the region through major infrastructure investments. The completion of the Baku-Tbilisi-Kars railway and the Alat Port could create a potential transit route for trade between East, Central, and South Asia and Europe. Azerbaijan has also vastly expanded its air cargo facilities with cold storage and a modern general cargo terminal at the Heydar Aliyev International Airport in Baku. These air cargo facilities will complement Azerbaijan's investments in road, port, and rail infrastructure (Yusifov et al., 2019, Abbasov and Askerov, 2021; Rustamova, 2022).

Along with Russia and Iran, Azerbaijan is constructing a North-South transportation corridor. At Alat, which is southwest of Baku, Azerbaijan has built a new port on the Caspian Sea. A rail and road hub, Alat can handle rail ferries that can carry up to 52 train cars at once and allows for multimodal north-south and east-west travel. Companies will be eligible for tax and customs concessions in a free trade zone next to the port, which will promote value-added processing and transit via Azerbaijan. In 2020, 4.8 million tons of goods (excluding oil) were transported in Alat Port. On July 1, 2021, a groundbreaking ceremony was held for the Alat Free Economic Zone (AFEZ), which is 40 miles south of the capital Baku and right close to the International Trade Seaport. The 850-hectare zone would help Azerbaijan expand its non-oil sector exports by luring foreign businesses and cutting-edge technology. With its strategic location and decently developed infrastructure (road, rail and airport network), Azerbaijan facilitates the transportation of goods between regions. It facilitates import in the field of e-commerce. The transportation of goods takes place via the cargo system (Trade, 2022a).

However, the logistics sector in Azerbaijan is not without its challenges. Existing problems in the sphere of development of international trade in the country have been identified. These problems include issues related to marketing, investment climate, and financing. Efforts are being made to address these challenges and improve the competitiveness of the logistics sector (Allahverdiyeva and Gojayev, 2023).

It is important in terms of facilitating trade that the US$ 100 pass tax applied to commercial vehicles entering and leaving the country has been abolished recently (MODDT, 2023). Even entrepreneurs who own a truck can get a logistics certificate, which is a problem in terms of quality and competition in logistics (ASK, 2023a). In 2022, a 1 Million Euro project on ensuring road safety in Azerbaijan was initiated together with Poland and Lithuania. The aim of the project is to improve the legal and institutional capacities and human resources of relevant government agencies and other stakeholders to better manage and coordinate road safety issues in Azerbaijan (MODDT, 2023).

Finance and Payments

Three key factors determine how e-commerce evolves. These include logistics, electronic platforms, and electronic payment methods. As mention before e-commerce in Azerbaijan is currently in a new phase of development. According to October 2021, the number of payment cards in Azerbaijan is 10 million. There were 673 thousand units. The increase in the number of payment cards has led to an increase in non-cash payments, the volume of domestic non-cash transactions increased by 73% compared to January-October 2020. The volume of non-cash payments for the first ten months of 2021 amounted to 8370 Million Manats. During this period, 5218 Million Manats falls to the shareholders of e-commerce. In October 2021, the volume of cashless domestic transactions with payment cards accounted for 34% of total transactions (Mamadov, 2021). The financial sector in Azerbaijan mostly consists of commercial banks and they hold more than 90% of total financial sector assets. Other financial institutions such as insurance, stock exchange, etc. are rather small and do not have a significant influence on the health of the financial sector. The concentration in the banking sector is high with the 4 largest banks holding more than 60% of total banking sector assets. At end-2020, there were 26 banks in Azerbaijan, of which 7 were majority foreign-owned and two majority state-owned banks. Banks' funding mostly consists of deposits that account for 76% of total liabilities, of which 29% are retail deposits and 46% are corporate funds. Another 18% of the total liabilities are claims of other financial institutions and securities issued (BSTB, 2021). In order to accelerate the digital transformation of the financial system, the "State Program for the dissemination of digital payments in the Republic of Azerbaijan in 2018-2020" has been adopted. The program has identified four areas for development in order to achieve its goals. These include further improving the corporate environment for digital payments, revitalizing the banking sector, shaping the digital ecosystem, and strengthening the advocacy and awareness of digital payments (Monitoring.az, 2018).

Table 3-6 The Main Directions and Priorities of the State Program

Directions	**Priorities**
1. Further improvement of the institutional environment for digital payments	. Development of a favorable business environment . Increasing the efficiency of the tax system . Strengthening the social protection system
2. Revival of the banking sector	. Acceleration of the banking sector recovery . Formation of an active money market
3. Formation of digital ecosystem	. Development of digital entrepreneurship . Development of e-commerce . Improving the legal framework for payment services . Introduction of new digital payment technologies . Development of digital banking . Wide application of smart payment means . Development of existing electronic payment services . Increasing financial inclusion in the region and remote areas . Stimulation of digital payments
4. Strengthen awareness and advocacy on digital payments	. Raising financial literacy . Raising public awareness of digital payments

Source: Monitoring.az, 2018.

Asan is a digital signature service developed by the State Agency for Public Services and Social Innovations under the President of the Republic of Azerbaijan. Asan İmza allows users to sign electronic documents securely and easily. It is used by a wide range of organizations in Azerbaijan, including government agencies, businesses, and individuals. The Asan Pay System allows all kinds of payments (invoice, penalty, rent, tax, etc.) ensures that it can be done (Monitoring.az, 2018). Also, **GoldenPay** is an online payment system developed by the Caspian Business Solutions company. GoldenPay allows users to make secure payments online for a variety of goods and services. It is used by a wide range of businesses in Azerbaijan, including online retailers, travel agencies, and telecommunications companies (FIP, 2021). **Azercell and Bakcell** are mobile telecommunications operators in Azerbaijan. They offer a range of e-commerce services, including online shopping, mobile payments, and bill payments (Doyar et al., 2023). Until 2002, it took a long time for post-issue payments to be received, but these days this period has been shortened (ASK, 2023a). SME support institution KOBIA encourages digitalization and gives information about it, but there is no direct financial support for SMEs in Azerbaijan (KOBİA, 2023). Mobile wallets have emerged in the last 2 years. It is requested to increase the online payment options (MODDT, 2023).

3.1.2.3 Main Actors and Initiatives of E-commerce Environment

Although there isn't a specific agency or organization in Azerbaijan that deals with e-commerce, numerous institutions and organizations contribute to and control the industry. For the growth of the e-commerce environment, these entities' efforts and initiatives at digitization are crucial.

The Ministry of Digital Development and Transport of Azerbaijan (MODDT) is a government agency responsible for developing and implementing state policies in the field of digital development and transport. The MDDT was established in 2017 by merging the Ministry of Communication and Information Technologies and the Ministry of Transport, Communications and High Technologies. MDDT is the organization responsible for the Online Azerbaijan Project**.** By offering high-speed Internet connectivity and creative ways to make it easier for people and organizations to use it in the country's most distant areas, it seeks to promote the wellbeing of the populace. On the basis of a public-private partnership model, Aztelecom LLC, Baku Telephone Communications LLC, Azeronline LTD, Smart Systems Technology, and MegaLink are carrying out the project. While GPON (Gigabit Passive Optical Networks) technology-based modern broadband solutions were first developed in 2017, they will begin to be widely deployed, including in regions, as of 2021. By the end of 2024, it is intended to provide all households in the nation with broadband internet access through GPON and other broadband technologies, which are thought to be the most recent trends in optical cable technology, in order to increase the use of high-speed Internet and the percentage of fixed broadband internet subscribers (Mincom, 2021)

The State Agency for Public Services and Social Innovations (ASAN): "Asan" is the formation that brings together all institutions serving individuals, institutions and organizations operating physically and online. When individuals and businesses go to these structures, they can handle all their official transactions from a single point. ASAN collects data about e-commerce through its e-government services. This data includes information about the number of online transactions, the value of online transactions, and the types of goods and services that are being sold online (Vxsida, 2023).

The Small and Medium-sized Enterprise Development Agency of the Republic of Azerbaijan (**KOBIA**) is another organization that aim to ensure sustainable economic development in Azerbaijan, increase the role of small and medium-sized enterprises in economic development, increase their share in GDP and employment, strengthen their competitiveness. Ensuring profitable and efficient access of SMEs to financing sources, producing goods mainly through SMEs in order to meet daily consumer needs, expanding the access of SMEs to foreign markets are strategic goals (SMB, 2023).

The National Confederation of Entrepreneurs (Employers) Organizations of the Republic of Azerbaijan (ASK) ASK as a public association of employers in the Republic of Azerbaijan, regardless of ownership and organizational-legal form coordinates the activities of legal entities and individuals engaged in entrepreneurial field on a voluntary basis, protects their legal and economic interests, carries out socially-useful purposes, and serves as a non-commercial and non-profit organization which does not aim to earn income as the main purpose of its activity (ASK, 2023b).

Center for Analysis of Economic Reforms and Communication "Objectives of the Center for Analysis of Economic Reforms and Communication is to develop proposals for realization of economic reforms based on analytical data by conducting analyses and researches on macro - and micro - economic levels directed to ensuring sustainable economic development of the country, as well as prepare mid – and long-term forecasts, provide government authorities and agencies with the same and organize promotion of the achievements made by the Republic of Azerbaijan in various sectors of the economy." (Ereforms, 2023) Azexport and Digital Hub, which are among the projects of this center, are very important for the Azerbaijan e-commerce environment.

Azexport portal, the main mission of which is to provide information about the goods of Azerbaijani origin, for the first time launched the presentation of Azerbaijani products on international e-commerce platforms over a single space (Azexport.az, 2023b). Established in 2016, Azexport is an online listing platform of registered Azerbaijani products. Not only Azexport, but also on the Alibaba platform, nearly 10,000 Azerbaijan products are listed free of charge. By making a gold membership in Alibaba as azexport, instead of supporting the memberships of individual companies, collective membership is made and waste is prevented. An important advantage of the Azexport model is that businesses are registered and their presence is physically tracked in regions by official authorities. Food products have free sale certificates. MEtaverse trade is seen as the future of this business and preparations are being made for virtual reality with VR offices thus, it will be possible to see the products as 3D. Nowadays, studies are continuing to transfer azexport to mobile applications (Azexport, 2023a). By Azexport, seminars are given not only to willing businesses, but also to go to the Regions by acting proactively and for potential businesses to do e-commerce. (Azexport, 2023a). The problem of trust in terms of consumers is an important problem. Within the scope of Azexport, awareness studies are carried out on trust, e-commerce and protecting personal accounts in adults and parents (Azexport, 2023a).

Digital Trade Hub (DTH) was established to strengthen the position of the Republic of Azerbaijan as the Digital Trade Center and expand its foreign trade operations. Project is an all-in-one e-trade and e-commerce portal guaranteed by the government. It offers a wide range of useful cross-border e-services for trade facilitation including B2B and B2G services, customs operations between DTH partner countries, online company registration, online bank accounts and much more. At the same time, it is aimed to increase digital trade and investments by providing mobile and electronic residence to non-residents via DTH. e-Residency (Electronic Residency) and m-Residency (Mobile Residency) is a government program, that allows entrepreneurs around the world to set up and run a location-independent business in Azerbaijan, using all the cross-border e-services of the Digital Trade Hub of Azerbaijan. e-Residency and m-Residency are essentially the same, though e-Residents receive token for authentication and electronic signatures, while m-Residents are issued with special Asan İmza (Mobile ID) SIM card that performs the same function. Azerbaijan is the world's second country, after Estonia, to offer e-Residency and the first country to offer m-Residency (Dth.az, 2023, Aliyev, 2022). legal regulations come at the forefront of the problems. Legal regulations cannot keep up with the pace of digital developments and capacity building is another important issue (Digitalhub, 2023).

International Cooperation's and Some Initiatives on E-commerce Environment

EU4Digital Initiative; with a variety of initiatives to advance important facets of the digital economy and society in accordance with EU standards and practices, the European Union's EU4Digital Initiative supports the digital reform agenda in Azerbaijan with the goal of fostering economic growth, creating more jobs, enhancing people's lives, and assisting businesses. EU4Digital will enhance governmental operations, encourage economic diversification by fostering job creation and growth, and enhance the quality of life for Azerbaijani inhabitants. EU4Digital's efforts to harmonize the digital markets will give everyone access to better online services at lower costs and with more options. Azerbaijan prioritizes the growth of the digital economy, with a particular emphasis on the centralization of e-services and the digitization of public services. In its priority sectors, the government's social and economic policy includes digital transformation (Eu4azerbaijan, 2023)

Azerbaijan: Leveraging Postal Network for Financial and Social Inclusion Program: The program that supported Azerpost modernization with a focus on the branch network internet access, computerization, connection to the payments systems, development of management information system (MIS) and products was the World Bank Financial Sector Development Project (FSDP). The project was funded by a loan from the World Bank and a grant from the Swiss State Secretariat for Economic Affairs (SECO). The FSDP project was implemented in two phases. The first phase, which ran from 2007 to 2011, focused on modernizing Azerpost's branch network. This included providing internet access to all branches, computerizing branch operations, and connecting branches to the national payments system. The second phase of the project, which ran from 2012 to 2015, focused on developing Azerpost's management information system (MIS) and products. This included developing a new MIS for Azerpost, which would provide better data and analysis for decision-making. It also included developing new financial products for Azerpost, such as savings accounts and microcredit loans (World Bank, 2011).

3.1.2.4 Policies, Regulations and Standards

Azerbaijan is a member of the United Nations, the Organization for Security and Cooperation in Europe, the Council of Europe, and the Organization of Islamic Cooperation. It is also a founding member of the GUAM Organization for Democracy and Economic Development.

The use of e-government in Azerbaijan has had a positive impact on e-commerce. E-government refers to the use of information and communication technologies (ICT) to deliver government services to citizens and businesses electronically. The formation of e-government in country was established by the Decree of the President of the Republic of Azerbaijan on the approval of State Program (E-Azerbaijan) for the development of communication and information technologies in Azerbaijan Republic in 2010-2012", and by the Decree on approval of "Some measures for provision of electronic services by government agencies" dated 23 May 2011 and other normative legal acts. The Ministry of Transport, Communications and High Technologies (MTCHT) as the coordinator of the work done in this area is working closely with other government agencies for the formation of e-government and is performing activities for the creation of appropriate infrastructure. Today the country present 289 e-services to its citizens and 143 e-services to its companies in the e-government portal (e-gov, 2023).

In the sphere of fintech, the Central Bank of Azerbaijan has been ardently advocating for the digitalization of banking and payment systems. In an effort to standardize the use of Quick Response (QR) code payment systems, the Central Bank took the initiative in November 2021 to formulate comprehensive methodological guidelines. These guidelines will not only harmonies the QR payment services proffered by banking and non-banking payment entities but also promote the wider acceptance of contactless transactions, thereby enabling a more affordable payment infrastructure. In a further attempt to streamline the digital banking landscape, the Central Bank revised and ratified a new regulation in April 2022. This new directive has the potential to significantly broaden the access to remote banking services by providing for the remote opening of bank accounts via digital identification. This represents a significant stride towards a more flexible and digitally adept banking environment, ushering in a new era of convenient and efficient banking services (EBRD, 2022).

Along with e-government in Azerbaijan, the establishment of an electronic monitoring system ensures flexible and effective public administration. Monitoring.az portal launched in October 2019, enables the creation of Big Data databases as a result of monitoring and evaluation of government strategies, programs, and action plans (Monitoring.az, 2023). On the other hand, Azranking.az portal provides for the generation of reforms using the database, and the reforms are also monitored again (Azranking, 2023, Hatam, 2020).

The aim of Enterprise Azerbaijan Portal is to raise the attractiveness of the country's investment and increase access to alternative funding sources for the development of the economy (EnterpriseAzerbaijan.gov, 2023).

As one of the e-government services for the development of e-commerce environment in Azerbaijan, "the green corridor" is of great importance. Main goal of the "Green Corridor" gating system is the creation more favorable conditions for foreign trade participants observing the legislation in the import-export operations, to strengthen the export potential of the country through acceleration of goods turnover from the customs border. The "Green Corridor" system allows users to import goods and vehicles directly to their warehouses without applying any customs control, and to export their goods without the presence of a customs officer, by removing the relevant customs security (Customs, 2023b). The Ministry of Digital Development and Transport is a central executive body implementing the state policy and regulation in the fields of transport, including maritime transport and civil aviation, communications, e-government, high technologies, information technologies (Mincom, 2023)

The Law of the Republic of Azerbaijan "On Electronic Commerce" (issued in 2005) plays a vital role in regulating e-commerce activities in the country (Hajiyeva, 2021). This law establishes the rights and obligations of parties involved in e-commerce transactions. It provides a legal framework for electronic contracts, electronic signatures, consumer protection, and dispute resolution in e-commerce (Aliyev, 2022). Efforts are continuing to update the e-commerce law, which entered into force in 2005, as one of the targets of the 2022-2026 National Development Strategy A situation analysis of e-commerce is carried out within the scope of a project carried out by the Ministry of Economy with the Asian Development Bank. Laws and best practices are being examined within the scope of the project and they will present their recommendations in the near future There has not been a comprehensive study on customer problems in e-commerce before, and it is expected that there will be information about customer problems in the Asian development bank Project). There are problems regarding the storage of data, and the legal infrastructure has not yet been prepared. Only the central bank keeps data on e-commerce and e-commerce is in the working area of more than one institution and there is no unit that provides general coordination (Ministry of Economy, 2023).

There is an antimonopoly and consumer rights institution under the Ministry of Economy, where complaints can be made. There is only one customer service number (195) where all government services are complained about. Standardization in e-commerce is a problematic issue (Ministry of Economy, 2023). The first electronic payment system was created in 2008. No specific license is needed for businesses to engage in electronic commerce; however, they must be registered with the State Tax Service and possess a TIN (Tax Identification Number). The Ministry of Economy oversees and regulates the electronic commerce in Azerbaijan. The government passed legislation in April 2017 to promote the use of non-cash transactions in an attempt to improve tax collection and promote transparent transactions (Trade.gov, 2022b). And requirements relating to the quality of goods and product liability are set out in the Civil Code and the Law on Protection of Consumer Rights.

3.1.2.5 Conclusion of review

- With the domestic economic benefits of e-commerce, exporting the goods produced in the country will provide a significant export income to the country. But it is necessary to develop e-commerce over the Internet in Azerbaijan. The government of Azerbaijan should continue to invest in the country's infrastructure, including the fiber cable network. State-owned ISPs dominate the Internet infrastructure and access to international Internet traffic. Although there are more than 40 ISPs in Azerbaijan, these two companies control about half of the market and private telecom providers have to pay high tariffs to use the government's shared communications infrastructure (Yoon, 2019).

- The absence of comprehensive regulations can create an environment of uncertainty and ambiguity, discouraging potential investors and hindering the growth of e-commerce. A well-defined legal framework is essential for establishing clear rights and responsibilities, resolving disputes, and ensuring fair competition in the online marketplace. Another problem is the lack of regulation in the activities of Internet providers, coupled with high costs, low-quality Internet services, poses significant challenges to the development of e-commerce. Although there have been remarkable developments in Internet affordability and speed in Azerbaijan since the early years, these are not at a sufficient level today (Nahmadova, 2021). The absence of stringent regulations allows Internet providers to set high tariffs, making it difficult for users to access reliable and high-speed Internet connections. Independent regulatory bodies are needed in Azerbaijan, as in the countries of the region Türkiye, Armenia and Georgia. This can help ensure equal Internet access for all and regulate prices. In addition, it can liberalize the e-commerce and internet service provider market and reduce prices with increasing competition and it will make easier for people to access the internet and shop online and encourage businesses to embrace e-commerce by providing tax breaks and other incentives.

- Young and tech-savvy population of Azerbaijan has a huge potential for e-commerce. The middle class in Azerbaijan is also growing rapidly and there are an increasing number of people who have the disposable income to shop online. The government should promote e-commerce by raising awareness of the benefits of online shopping through advertising, public relations and other initiatives.

- Consumers must be protected by enacting laws regulating e-commerce. These laws should ensure that consumers are protected from fraud and other abuses. Thus, it will ensure the confidence of the young population and middle-class citizens in online shopping. On the other hand, one of the most important problems of today is cyber security. With digitalization, citizens need to believe that their data is secure in e-commerce environments. Azerbaijan should act transparently in terms of state practices and force e-commerce companies to take the necessary cybersecurity measures.

- Government agencies need to digitize their services more and should add their services in to the single-door (e-gov.az) digitized services to citizens. In this way, citizens will be able to do their business online quickly instead of waiting in line for minutes. Thus, internet use and trust in the Internet will increase in the country. In this context, the work of Azerbaijan and Türkiye is an exemplary best practice. On October 1, 2022, the Turkish Presidency Digital Transformation Office and the Citizen Service and Social Innovations State Institution affiliated to the President of the Republic of Azerbaijan announced that they have started working together on the integration of

Azerbaijan's e-government portal (https://www.e-gov.az/) and Türkiye e-government portal (https://turkiye.gov.tr/). On the other hand, Azerbaijan is in a strategic position between Europe and Asia. This makes it an ideal hub for e-commerce in the region. In recent years, after the rapprochement with Türkiye, we have seen that brands such as Trendyol have invested in Azerbaijan. The normalization after the war with Armenia will have a positive impact on investments. It will be useful to continue this process.

- It is necessary to carry out studies specific to e-commerce and to establish a task force for inter-institutional cooperation. In addition, a unit that provides general coordination should be established. The value-added tax advantage in digital payments in Azerbaijan is very important in promoting the transition to digital money and can be an example for other countries that want to switch to digital money.

- Within the scope of field visits, Azerbaijan Employers Confederation was visited. It is an organization that bridges between the state and the owners, with approximately 6000 members and 24 centers. There is no member enterprise within the confederation that only engages in e-commerce. The need for B2B structures came to the fore in the interviews. According to the authorities, Businesses do not know the benefits of e-commerce and the services that can be offered, while end users are ready for internet shopping, businessmen are not of this mindset. Projects should be carried out to attract business owners (ASK, 2023a).

  By taking these steps, the government of Azerbaijan can help to create a more favorable environment for e-commerce in the country. This will help to boost economic growth and create jobs.

3.1.3 Jordan

3.1.3.1 Background

The Hashemite Kingdom of Jordan, which has a strategic location in the Middle East, is surrounded by Syria to the north, Iraq to the northeast, Saudi Arabia to the east and south, the Red Sea to the south, and Israel and Palestine to the west, Jordan has an area of 89,213 square kilometers, and about 75% of this area is desert. Jordan and the Palestinian territories, the crossroads of the Middle East, have been at a strategic connection point in terms of trade and communication connecting Asia, Africa and Europe since the beginning of civilization (UNFPA, 2023). Jordan's population has also more than doubled in the last two decades, from 5 million to 11 million. The unemployment rate is 22.6% in Q2-

2022 and its still above pre-pandemic levels especially among women (29.4%) and youth (46.1% among those under 25 years old). Labor force participation is also low, (33.5% in Q2-2022), particularly for women (14.2%), it's one of the lowest rates in the World (World Bank, 2023h).

Despite a challenging global environment, Jordan's growth rose to 2.7 percent in real GDP in the first half of 2022, supported by an increase in tourism, full economy opening and increased exports. The recovery in economic activity was reflected in the labor market indicators to a limited extent, and unemployment rates decreased gradually. Although inflation has reached its highest level since 2018, it is under control compared to the countries in the region with the control measures implemented. Public investment, the main driver of growth, can help Jordan lay the foundations for sustainable socioeconomic development. Jordan's limited financial framework underlines the need to focus on managing public investments efficiently and effectively and public investment expenditures have been declining steadily over the past two decades (World Bank 2023j).

3.1.3.2 E-Commerce and It's Impacts to Jordan

Jordan, which is one of the most advanced countries in the region in e-commerce and whose e-commerce opportunities are developed by various service providers (Trade, 2022a). Jordan ranks 57th in World eCommerce with an estimated revenue of US$2,759.4 million in 2023. With an expected 16.5% increase in 2023, the Jordanian eCommerce market contributed to the worldwide growth rate of 17.0% in 2023. Jordan E-Commerce is expected to reach a volume of US$ 4,494.5 million by 2027, with an annual growth rate of 13.0% (CAGR 2023-2027) (UNCTAD, 2022b). In the Jordanian E-Commerce market, the number of users is expected to reach 4.81 million by 2027. With this rate, user penetration is targeted to reach 36.6% in 2023 and 41.4% in 2027 (Statista, 2023f). There are different e-commerce platforms in Jordan. For example crafts.market is a non-profit platform designed to support crafts makers to help them grow in Jordan and overseas through giving them the chance to display and sell their products online. It is a great opportunity for artists and artisans to easily share and sell their crafts online. Also Bokeh is a platform that was developed for garments producers in Jordan to sell B2C. The official launch of the platform will be within one month (JEDCO, 2023a). Despite the high technology adoption rate, people prefer to do their usual shopping from physical stores rather than eCommerce purchases. E-commerce is more common in lower and middle age groups. Within the scope of the consumer research conducted in Jordan, it is seen that in the last 3 months, 50% of the participants bought products through social media, 39% through websites, and 32% of them ordered food through software applications. Clothing (66%) and grocery shopping (22%) rank first in purchases made through social media and websites (IPSOS, 2021). In the Jordanian E-commerce market, Electronics and Media account for 29.9% of Jordan's e-commerce revenue. This is followed by

Food and Personal Care with 25.7%, Fashion with 20.0%, Furniture and Home Appliances with 17.0% and Toys, Hobby and DIY with the remaining 7.3% (ecommercedb, 2023). In terms of services, gaming, Arabic educational courses, health care online services, financial services, AI, digital marketing, business and other consultancy services, and online food services are promising sectors for e-commerce services in Jordan (UNCTAD, 2022b). According to the results of the research conducted on 1228 consumers in Jordan, the products preferred by consumers in online shopping are; clothing, shoes, bags & accessories (72%), Personal care (32%), Food products (31%), Electronics (30%), Furniture and household goods (18%), home decoration products (17%) (UNCTAD 2022b). In the online services received by Jordanian consumers who participated in the survey; Online food (77%), Digital payments (34%), Financial services (21%), Digital marketing (14%), Hotel (14%) stand out. 1240 participants who answered the relevant part of the survey, the prominent factors in their e-commerce site selections were price (70%), delivery fees (60%), delivery time (53%), information about product quality (52%), Knowledge on whether it is a trusted site (50%), Clarity of the site (48%), Possibility to contact the seller or return the products (45%), Protection of personal data (45%), Transparency of sales conditions (41%), Availability of Ranked as multiple payment solutions (37%), Arabic language (37%), Choice of products (35%), Information on payment security (30%) and other (35%) (UNCTAD 2022).

While the volume of online transactions is increasing, there is limited statistical data on the volume of e-commerce. Data on e-commerce for imports and exports are not available, so figures for e-commerce are estimates provided by customs authorities and private companies, which can be contradictory. Most e-commerce initiatives are not registered and use social media to promote and sell, the market is not organized, and no protection is provided for consumers and traders (Trade, 2022a). In fact, Jordan has established a successful open data access portal since 2017. To ensure the quality of open government data, the Jordanian government approved the Open Government Data Quality Framework on 22.9.2020 and there are 331 datasets under Economy and business alone (PortalJordan, 2023). The published content does not cover real demand; it also is poor quality in technical, legal, and even content aspects (UNCTAD, 2022b).

In an academic study conducted in Jordan, the external motivations that enable SMEs to enter e-commerce are customer pressure and the availability of ICT consultancy services. The organizational factors affecting the adoption of e-commerce are the knowledge and attitudes of top managers and employees. Finally, the diversity of technology-related factors also has a significant impact on e-commerce adoption by SMEs in Jordan (Alamro et al, 2011).

ICT Infrastructure

The information and communication technology (ICT) sector in Jordan is one of the fastest growing, contributing approximately 4% of gross domestic product (GDP). Since the 1990s, Jordan has established itself as a regional ICT hub and aims to attract more investment in this sector. The current National Digital Transformation Strategy and Implementation Plan 2021-25 aims to advance the digitization of government services, improve connectivity and create at least 50,000 direct jobs in the digital sector by 2025. The main challenges to improve the environment for investments in the ICT sector are in three areas: Business and regulatory environment, Mismatch between demand and supply of skills, High ICT costs and lack of enabling infrastructure. Secondly one of the biggest challenges for investors in Jordan is the mismatch of supply and demand for ICT skills. For example, in the field of ICT, which has 8000 graduates per year, approximately 7.5% work in the ICT sector. Third, Jordan has high prices and taxes for fixed broadband basket, mobile voice and mobile data in the Arab region. This led to poor service quality, hindering the growth of digital payments and mobile e-commerce. Jordan also needs significant InfraTech investments such as cloud services, fiber optics, IoT, expanding 4G and promoting 5G (EU-OECD, 2022). Jordan has an Internet penetration rate of approximately 68 percent and has more than one Internet service provider (ISP), as well as high-speed broadband is widely used (Trade, 2022a). Estimates show that in 2026, Jordan will have 80.7% internet penetration, 49.28% mobile phone subscriptions per capita, and 6.11 fixed broadband subscriptions per 100 inhabitants (Statista, 2023g). In some sources, the data may differ. According to Daterportal at the beginning of January 2023, Jordan has a population of 11.32 million, 9.95 million internet users (88% internet penetration), 8.61 million users (76.1% of the population) with active cellular mobile connections and 6.61 million social media users (58.4% of the population) (Kemp, 2023).

Table 3-7 Table Jordan ICT Indicators

Indicator	Percentage/Number
Jordan's families have Mobile Phones	%98.4 (2017)
Jordan's families have Smart Mobile Phones	90.3 (2017)
Internet Services at home	%88.8 (2017)
General Internet Usage (estimated)	%65 (2018)
Employees working in telecom sector,	4,045 (2018)
Internet Subscribers Fixed & Mobile(Million)	9,14 (2018)
Mobile Internet Subscribers (Million)	8,8 (2018)
Internet Penetration rate	%88.8 (2018)
Mobile network coverage by population (4G)	%99 (2019)
Mobile penetration rate	%77(2019)

Source: TRC, 2023

Jordan's 5G efforts gained momentum in 2022 when the Telecommunications Regulatory Commission (TRC) signed an agreement with two operators in preparation for the provision of 5G services in the kingdom (O'Grady, 2022)

Taxation

Although Jordan started to implement electronic commerce legislation a few years ago, clear regulations and tax law covering e-commerce transactions have not yet emerged. Legislation allowing and regulating electronic signature is still needed. Jordanian electronic commerce is not specifically regulated and promoted. No extra tariffs are applied to electronic transactions (Privacyshield, 2023).

The Corporate Income Taxes (CIT) rates in Jordan are applied based on the industry/business activities from which the taxpayer generates income. According to the income tax law, the CIT rates are 35% for banks 24% for telecommunication, insurance and reinsurance, financial intermediation companies and 20% for other companies. In addition, national contribution tax is applied at different rates according to the sector on the taxable income of all legal entities. For example, for companies engaged in raw material mining, this rate is 7%. There are no governorate or local income taxes in Jordan (Pwc, 2023c). Tax transactions have been operating under the e-government structure since

2005, and tax transactions can be done electronically and the site is only in Arabic language (Etax, 2023).

Employment

According to our research, there is no data on the number of employees in the e-commerce sector in Jordan. In the Jordan E-Commerce Strategy, employment of educated youth, especially in knowledge-based and high value-added jobs, is included, and the number of graduates working in the ICT sector, financial services sector and logistics sector is determined as a target indicator (MICT, 2007).

Considering the latest global digitalization trends, the Tech-Enabled and Information and Communication Technology (ICT) sector presents good potential for growth and job creation in Jordan. According to the World Bank, this sector contributed 12% to GDP in 2017 and created about 22,000 jobs in 2018. Furthermore, women's employment in this sector accounted for 33% in 2018, which is higher than the national average for women's employment (RYSE, 2022). While Jordan has a young, tech-savvy population, there are significant mismatches between the skills of recent university graduates and the needs and expectations of the digital economy (Trade, 2022a).

Trade Facilitation and Logistic

Recently, the Jordanian Customs Department issued a new amendment to the law in regard to clearance of online orders for personal use introducing new tariffs; shipments under 200 Jordanian Dinars will be subject to customs fees with an amount of 10 percent of the shipment value with a minimum of 5 Jordanian Dinars. Moreover, anyone buying from an online store should have their national number for Jordanians and residency number for non-Jordanians on their shipment to be processed by the Jordanian Customs Department (Trade, 2022b).

Jordan's transportation and logistics sector plays a key role in Jordan's economy, contributing to over 8.2% of GDP It is growing at an annual rate of 6% and employs Jordan is equipped with high quality air transport, complimented by more than 2,700km of highway network covering all corners of the Kingdom, as well as efficient, cost effective ports (Moin, 2019). Barriers for Jordanian MSMEs to engage in e-commerce activities include poor competitiveness in terms of delivery efficiency (Trade 2022)b. However, Jordan and Oman have better infrastructures than e-commerce surrounding countries. Laws enacted by Jordan to control electronic transactions have also paved the way for the increase in e-commerce (WTO, 2020).

Finance and Payments

The kingdom of Jordan formed several public and private financing organizations (i.e. JEDCO, NAFES, Development and Employment Fund, Jordan Investment Board and the Jordan Loan Guarantee Corporation and other private sector organizations such as micro and SME finance institutions). Since 2016, JEDCO has partnered with international organization to address issues for SMEs and start-ups by producing three "how to" guides 1) Reinforcing SME policy coordination and public-private dialogue, 2) effective monitoring and evaluation of SME and entrepreneurship initiatives and 3) SME statistics and entrepreneurship indicators. Jordan receives also ongoing support from international donors, and notably the European Union in the field of innovation and entrepreneurship (Medmdmes, 2023).

Jordan Mobile payment system is an electronic system operated and supervised by the Central Bank of Jordan, where banks, companies and service users are registered. JoMoPay was officially launched on 1/4/2014 as a result of the radical change in mobile payment services in terms of storing or preserving small financial values, transferring them to meet financial needs and making transactions in electronic wallets. The system is a new and secure tool for instant electronic payment. It allows a user to use mobile transfers and payment orders of small values, including bill payment, transfer from person to person, and direct payment for purchases (CBJ, 2023). Despite the development of electronic payment facilities, 80% of Jordanian society prefers to pay in cash despite the effects of the pandemic (IPSOS, 2021). Because they don't trust digital payment (Sawaid, 2023).

According to the results of the research conducted in Jordan, 60% of the public are aware of Mobile wallets and awareness is significantly higher in younger age groups, with 14% of the population using mobile wallets. To transfer digital money (44%) as the most important reason, about 30%, especially women, younger age groups and those who are not currently in the workforce, are considering opening a mobile wallet in the future (IPSOS, 2021). When the reasons for not using digital financial services are investigated, more than 50% of the participant's state that they do not need digital financial services, about 20% of them say that the services are not reliable and more than 20% of them state that the services are complex. Technical reasons, inaccessibility to services and other reasons are around 10%. 55% of the participants state that they are satisfied with online banking and 64% with mobile banking (IPSOS, 2021). Business owners are also included in the survey 22% of businessmen provide e-commerce services and 26% offer digital payments. 83% of business people say they pay cash to sellers. The reasons why businesses do not provide digital payment services are customer reluctance (74%), complexity (23%), lack of internet in the workplace (20%), dislike of digital by business owners (11%) and extra charges (9%) (IPSOS, 2021). While credit card fees and commissions were high in Jordan in previous years, these commissions were reduced by sharing between the central bank and implementing institutions. Banks are making efforts to increase digital payments through loyalty programs. The number of businesses that have the right to open an e-wallet in Jordan by providing the necessary qualifications and passing the audits are 8. Jordan online payment systems are secure and stable, and Jordan is accredited to 20 international payment systems (CBJ, 2023).

3.1.3.3 Main Actors and Initiatives of E-commerce Environment

The Ministry of Digital Economy and Entrepreneurship (MODEE). Modee is working on the digital transformation of service delivery to citizens and businesses. Digital Entrepreneurship, Digital Skills, Digital Services, Digital Infrastructure, Digital Providers and Strategic Projects constitute the enabling legs of this transformation. Modee works with other government agencies and the private sector to tackle the challenges entrepreneurs face, particularly in the digital world, such as access to markets, access to finance, regulatory challenges and access to talent (Modee, 2023a).

The Ministry has initiatives under 4 main headings. ***The Employment Subsidy Incentive*** aims to stimulate job creation by supporting the growth and recruitment plans of digital firms, startups, NGOs and different Government agencies by covering part of the monthly salary of new start-ups. The program cover up to 50% of the new employee monthly salary. Large or medium-sized companies that plan to recruit IT graduates with a digital firm or startup (entrepreneurship project) can benefit (Modee, 2023b). In the **Digital Skills initiative,** 50% of the internship costs of the Graduates are supported for 12 months in the private sector and public universities (Modee, 2023c). **Entrepreneurship** initiative includes the titles of the national Incubation Program, Access to market plan, The "Facilitating Entrepreneurial and startup Businesses" initiative, Preparing a legislative framework for social entrepreneurial companies. The 4th initiative is the Youth, Technology and Employment. With this project, it is aimed to provide digital professional programs to develop the skills of 30,000 young people and women (Modee, 2023d).

The Ministry of Industry Trade and Supply(MIT): Ministry's national objectives are Develop Jordan's economy so that it becomes prosperous and open to global markets, Enable the national economy in order to cope with the annual growing flow of Jordanian labour, Enhance supply dimension in food security and Consumer Protection Policies, as well as ensure the quality and availability of goods in markets at proper prices, Enhance government management to be financially stable, transparent and accountable(MIT, 2023a) The Ministry endeavors to accomplish some of its tasks through its associated institutions(MIT, 2023a).

Jordan Institution for Standards and Metrology (JISM): It's main function is represented in playing the proactive and active role in the protection of human health and safety, human rights and environment, and promotion of confidence in market services and products.

Jordan Enterprise Development Corporation (JEDCO): JEDCO was established in 1972 as the government arm to support the private sector in Jordan to become competitive in the global markets. The organization has important programs in different fields such as Startup programs, capacity building programs, agricultural programs, marketing skills development programs, Freight support programs (JEDCO, 2023b). For example, Freight support programs JEDCO provides financial support for air and sea freight up to 50% of export shipping costs for all SMEs in Jordan (JEDCO, 2023c). In June 2020 immediately after COVID19 lockdown was eased in Jordan, JEDCO launched a project in which it supported manufacturing SMEs develop capacity in one of two fields; e-commerce and remote management. The design of the project obviously responded to then circumstances that emerged with the pandemic and obliged businesses to operate with restricted movement of their human resources and with limited reach to conventional markets. The project therefore provided 11 SMEs single and specific grants to be used for registering on virtual marketplaces and use digital marketing techniques to reach non-conventional markets. Each grant was up to JOD 7000 ($10,000) and 30% co-sharing from SMEs. One year later, around 300,000 Euro was secured as a grant from one of GIZ operating projects in Jordan to run a second round of the previous project. The new round involved training and coaching to SMEs as extra services in addition to the $10,000 grant. Total of 28 SMEs were served in the second round (JEDCO, 2023a).

In 2021, JEDCO prepared a package consisting of elements such as amazon trainings and exhibiting on Alibaba for the benefit of 30 companies. While the number of applications was expected to be high, 70 applications were received. JEDCO is part of the National e-commerce strategy. After the Government of Jordan issued the National E-commerce Strategy in 2022, and as JEDCO was present in all committee meetings that preceded and followed the launch of the strategy, the role of designing and implementing a project to support SMEs develop e-commerce capacities was assigned to it. JEDCO met with its partners and designed the project to serve 30 SMEs in a structure almost identical to the previous initiatives (JEDCO, 2023a).

While the use of the Internet and e-mail remains popular among Jordanians, e-commerce is still in development for the business community. The Jordanian government has launched a major eprocurement initiative. This initiative will provide the initial support needed for the establishment of the Jordanian government e-purchasing platform (Privacyshield, 2023).

The Business Development Center–(BDC): is a non-profit organization operating in Jordan to promote sustainable socio-economic development through employability and entrepreneurship education programs. Social enterprises support with a strong team of experts and trainers. Since its founding in 2004, BDC has reached more than 4,000,000 people in Jordan and the region with the support and trust of international donors, INGOs and UN agencies (BDC, 2023a).

BDC ran the Boost with Facebook project in 2020, after an in-depth study of what SMEs need. The aim of the project is to help SMEs and entrepreneurs better understand E-marketing concepts and how to apply these concepts in Meta platform tools. In the first phase BDC and Meta trained 1000 SMEs (BDC, 2023b). After that BDC is running the "Boost with Facebook phase two project" together with facebook. The program aims to raise awareness and promote the various tools and products available on "Facebook, Instagram and WhatsApp" Meta platforms to build and grow an online presence among SMEs. Three-day, 10-hour, 50-training to 1,000 SMEs (500 beginner and 500 advanced) developing financial statements, online sales techniques and marketing strategies, labeling and packaging, promotion and sales of online products and services, customer relations, export strategy, market analysis, and B2B or B2C businesses to establish new digital tools, trainings were given. The 30 most successful SMEs receiving this training will receive mentorship for practical applications (BDC, 2023c). In these tutorials Facebook give train BDC trainers and then they train (BDC, 2023d). In another program run by BDC, approximately 3000 young people were first given behavioral trainings for professional business life by BDC. Then, they received vocational training in 150 companies in cooperation with EBD, with their expenses covered by EBD. The rate of those who got a job after going through the training process is 89%. Although this support model is not only applied for e-commerce, training contents and support model for e-commerce are very important (BDC, 2023d). According to the BDC management, standards are one of the most important elements in e-commerce. It is necessary to have standards on platforms in product display. Other factors are the branding problems of companies engaged in e-commerce, accreditation of e-commerce companies and the creation of structures where SMEs can receive support for e-commerce (BDC, 2023d).

3.1.3.4 Policies, Regulations and Standards

Since there is no regulation for e-commerce in Jordan, there is no registered e-commerce business. Companies engaged in e-commerce register in other sectors or operate unregistered (MIT, 2023). First national e-commerce strategy was adopted in 2008. In this 8-part strategy document, after the framework of e-commerce was drawn, the vision and purpose sections were included and the Enablers were listed. The next section is strategy taking and risk analysis (MICT, 2008). Although e-commerce strategy was determined in a period that can be considered early, it has not been fully implemented. The overall e-commerce ecosystem in the country at the time, the dedicated human and financial resources, and the necessary implementation mechanisms were not adequate for its implementation. Unlike 10 years ago, at present Jordan seems to be in a better position to create a conducive environment for a thriving e-commerce. National plans and policies are calling for the development of a strategic roadmap to promote e-commerce in the country, to boost online and trade activities and make it an effective tool to enable export growth (Trade, 2022a) Coordination and cooperation among e-commerce players are limited. One of the main reasons for the lack of implementation of national policies and strategies is related to the limited coordination and the lack of unified governance body to follow up on implementation (Trade, 2022a)

The Council of Ministers adopted the Jordanian National E-Commerce Strategy at its session at the beginning of April 2023 and established the Ministry of Industry, Trade and Supply to start implementing the 2023-2025 strategy in cooperation with relevant parties The aim of the strategy is to create a secure e-commerce environment using modern technologies that attract investment and businesses, provide better income opportunities for Jordanians, and increase the competitiveness of micro, small and medium-sized enterprises and entrepreneurs through e-commerce solutions. The strategy will be implemented in three phases over a 10-year timeframe in line with Jordan's Economic Modernization Vision, with the first phase being the creation of a national mechanism for e-commerce activities in Jordan covering the years 2023-2025. This phase also includes launching e-commerce-related pilot projects to strengthen MSME's and reviewing the existing legal and regulatory framework for improving the e-commerce environment. The second phase of the e-commerce strategy, which will last from 2026 to 2029, aims to create a competitive environment in the field of e-commerce based on the results of the first phase. The goal of the third stage, running from 2030 to 2033, is to develop a leading competitive advantage and adapt emerging e-commerce technologies to make Jordan one of the fastest-growing e-commerce centers in the region (Jordannews, 2023).

Jordan eCommerce Readiness Assessment was prepared in 2022 by UNCTAD and this report provides a detailed analysis of the national e-commerce ecosystem and provides the government with concrete policy measures that can accelerate the country's digital transformation. The assessment, along with the action plan, are funded by the “Trade for Employment” project implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Kingdom of the Netherlands (UNCTAD, 2022b). The information and findings in the related report are used in the Jordan part of this report by citing the source. Laws, strategies and action plans regarding e-commerce are an indication of the political importance given to e-commerce by the Jordanian government. The UNCTAD Global Cyberlaw Tracker tracks the state of e-commerce legislation in the field of e-transactions, consumer protection, data protection/privacy and cybercrime adoption in the 194 UNCTAD member states of these 194 countries, 81% Have E-Transaction Laws, 59% Have Consumer Protection Laws, 71% have Privacy Laws, and 80% Have Cybercrime Laws. There are regulations regarding these 4 titles in Jordan (UNCTAD, 2023b). Jordan has Electronic Transaction Low. The purpose of this Law, which came into force in 2001, is to enable electronic transactions to be made, taking into account all other Laws and without making any changes or deletions in these provisions. In the implementation of the provisions of this Law, international trade levels including customs electronic transactions are taken into account. (Wipo, 2023) In 2015, the consumer protection law was also enacted, the data protection law is in draft form, and the Information Systems Crime Law came into force in 2010 with the law no. 30 (UNCTAD, 2023b). Another important issue of international trade is the protection of intellectual property rights and Jordan has passed several laws in compliance with international commitments to the protection of intellectual property rights (IPR). The Ministry of Culture's National Library Department is responsible for registering copyrights, and patents are registered with the Registrar of Patents and Trademarks at the Ministry of Industry, Trade and Supply. Jordan is a signatory to the Patent Cooperation Treaty and the Madrid Protocol. In 2017, Jordan acceded to the Patent Cooperation Treaty (PCT) Between 2000 and 2016, more than 5,934 IP-related cases were submitted to the courts (Trade, 2022c). Jordan started to introduce electronic commerce legislation a few years ago, though there has yet to emerge a clear set of regulations covering e-commerce transactions. Legislation that allows for and regulates electronic signatures is still needed (Trade, 2022a).

Jordan has trade agreements with nearly 60 countries (MIT, 2023b). Jordan is also party to bilateral trade agreements with United States, Canada and Singapore and is a signatory to several regional trade agreements including the European Free Trade Association (Norway, Switzerland, Liechtenstein), Greater Arab Free Trade Agreement (GAFTA) and Aghadir Agreement (Egypt, Morocco, Tunisia) which is connected to the Association Agreement (EU) (Trade, 2022d). These agreements and collaborations offer opportunities and conveniences in international e-commerce for Jordan. The Jordan Standards and Metrology Organization is the government organization legally responsible for the preparation, publication, and review of Jordanian standards and regulations for products and services. SMO issues two types of standards: Technical Standards, Standard Specification. Technical standards (Jordan Quality Mark) are published in the Jordan Official Gazette in hard copy only and are registered in the Jordan Quality Mark database (Trade, 2022b). On the Jordan E government portal, which is quite functional, many transactions can be made regarding public services, and some data can be accessed openly (FormJordan, 2023). According to 2022 data, Jordan ranks 100th among 193 countries in the E-Government Development Index and 67th in the E-Participation Index (UN, 2023). Some of the most used transactions on the Jordan e-government portal, which serves in Arabic and English languages: electronic registration transactions, online payments, verification of clearance and the national e-invoice system (ISTD, 2023a). In addition, tender announcements and tender documents can be easily accessed via e-government forms (ISTD, 2023b). There is no special legislation on consumer protection in e-commerce, and preparations will begin after the enactment of the law on e-commerce. However, with the law of 2007, consumer rights are protected after sales. With other legal regulations, consumers are protected by standards regarding medicines and foods. There are also regulations regarding Anti-monopoly. There is a platform in the e-government system with contact information on Consumer Protection, and an application can be made to the ministry (MIT) online or physically. The owner of the company is asked to defend it within a certain period of time, the ministry is asked to make a correction, and if it is not done, they are directed to the court.

3.1.3.5 Conclusion of review

- After preparing UNCTAD Jordan E-Commerce report on 22/02/2023, National E commerce Strategy approved on 6 April 2023 and the National task force consisting of different institutions/organizations related to e-commerce prepared the 2023-2025 action plan by taking the opinions of the relevant stakeholders (MIT.2023). Ministries are responsible for leading or participating in related topics according to the action plan, MITS is partner or leader in all actions and reports are submitted to MIT for coordination(MIT.2023). In the UNCTAD (2022) report, lack of coordination is cited as one of the main reasons for the non-implementation of national policies and strategies. The creation of a high authorized National task force and the determination of the ministry responsible for general coordination eliminates this deficiency (MIT. 2023). Preparations for planning and coordination for the development of e-commerce in Jordan have been completed, and implementation activities continue at full speed. With the enactment of e-commerce legislation, a new era will begin for Jordan.

- The three main factors that can drive digital growth in Jordan are its tech-savvy youth population, its relatively well-developed ICT and innovation sectors, and Jordan's strategic location between East and West. Jordan also benefits from a mature business environment in terms of digital companies and startups, financing institutions, incubators, accelerators and other mechanisms supported by numerous local and international partners. This will pave the way for the development of e-commerce in the country, provided that the advantages are high level of government support, improved coordination among all stakeholders and the quality of services provided across all e-commerce is constantly improved (UNCTAD, 2022b). The e-commerce market is not organized and no protection is provided for consumers and merchants.

- One of the important issue is that the definition of e-commerce has not been made yet and one of the weaknesses is the lack of data collected specifically for e-commerce, and each institution collects data in its own way (MIT.2023). More accurate data on e-commerce in the country will be key to better nurturing e-commerce in the future and turning it into a major driver of Jordan’s economic growth.

- The Jordanian government's e-procurement initiative is highly recommended in Somalia. It is very important for companies to make their applications to the government online and to follow the tenders online in improving their e-commerce power. Jordan's economy is driven by small and medium-sized enterprises (MSMEs), which consist of 98% of businesses in the country. The main challenges for these businesses are access to new markets, lack of skilled labor, lack of business planning, high competition from price-competitive imports, difficult access to finance and low use of new technologies. The weakness in the use of new technology creates an obstacle to E-Commerce competence. (Medmdmes, 2023). Businesses in Jordan lack technical capacity for E-commerce and businesses cannot focus on E-commerce strategically (JEDCO, 2023a).

- Customers are not aware of the concept of e-marketplace platforms and they are forcing e-commerce companies to trade in the traditional way. The absence of regulation policies in e-commerce through social media causes problems due to informality, especially in the health sector. B2B e-commerce in Jordan is in its infancy and needs improvement. In B2B e-commerce only commissions are used, and the adoption of new financial models such as membership fees is also important for the development of the e-commerce sector (Sawaid, 2023).

- There is no problem in the ICT infrastructure, but that it is difficult to find talented ICT professionals as they would like to work for different countries (Sawaid, 2023).

- Despite the young population in the country and the strength of the ICT infrastructure, the low interest in digital financial services stands out, which is one of the important obstacles to the development of e-commerce. In other words, increasing interest in digital financial services will pave the way for the development of e-commerce in the country. Considering that it is unreliable and complex is among the main obstacles faced by the Jordanian public in using digital finance tools. Although it is seen that there are legal applications, efforts to increase the perception of reliability of digital financial instruments can be concentrated on. The majority of commercial transactions in the country are carried out in cash. Although cash operation seems advantageous for companies in the short term, they may experience competition problems in the face of e-commerce trends, international market places such as buy now, pay later campaigns. The use of digital financing tools will also reduce informality and increase tax revenues. One of the sectors affected by artificial intelligence, whose impact on the Middle East is estimated to be 320 Billion USD in 2030 (Pwc, 2018), is e-commerce. It is very important for Jordan, one of the important actors in the Middle East, to continue its digital transformation efforts with big data investments, and local e-commerce platforms will also provide significant benefits at this point.

3.1.4 Pakistan

3.1.4.1 Background

Islamic Republic of Pakistan is a country in South Asia. It is the world's fifth-most populous country, with a population of over 249.5 million people, and has the world's largest Muslim population as of year 2023, also, it is 33th largest country in the world by area. (CIA, 2023a) Pakistan Labor force was reported at 7,890,9456 in 2022, according to the World Bank, compiled from officially recognized sources (World Bank, 2023k). Pakistan unemployment rate for 2021 was 4.35%, a 0.05% increase from 2020. IMF has projected unemployment rise to 8,8 in 2023 (IMF, 2023c).

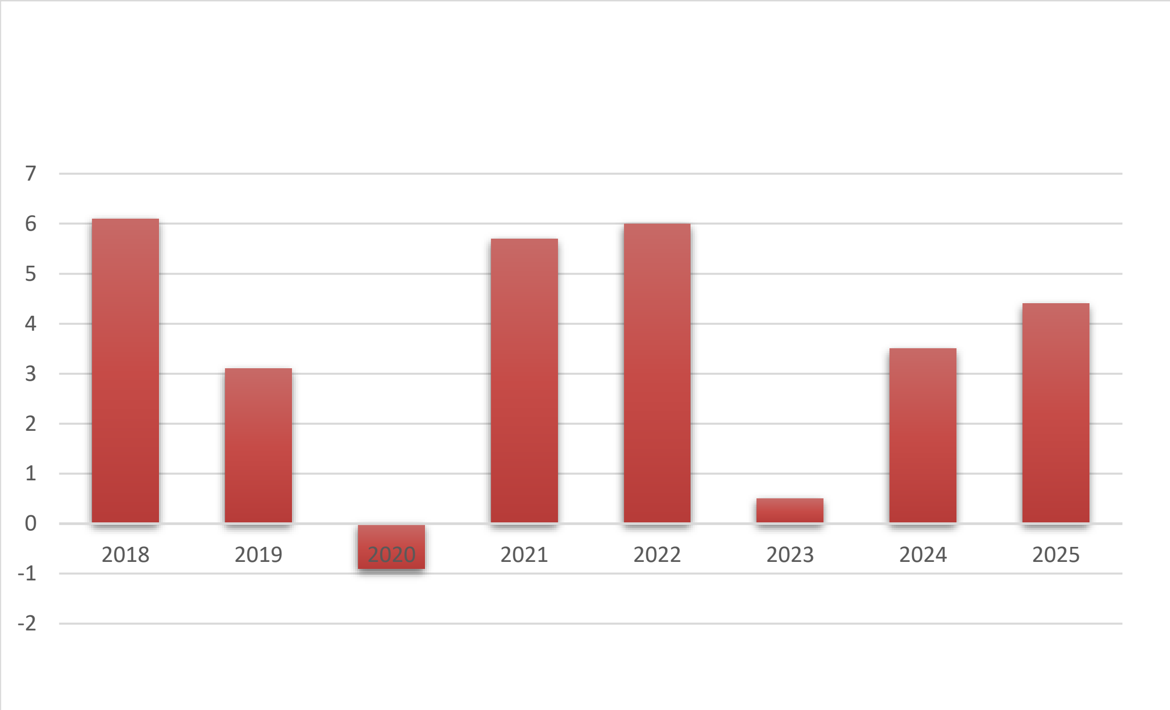
The geopolitical situation, difficult financial environment, and high inflationary pressures have posed significant economic risks for Pakistan's economy. Devastating floods and political unrest made more difficult the situation. Pakistan’s economy witnessed a high growth rate of 6.1 percent in 2022, however, it was unsustainable as it was largely driven by domestic demand, ended up with a high fiscal and current account deficit. Main challenges to economy is regaining sustainable macroeconomic stability, reducing poverty, fiscal consolidation, and addressing weaknesses in the external account (Ahmad, 2023). Growth remained strong in fiscal 2022, and a larger fiscal deficit pushed up inflation despite tighter monetary policy. A substantial rise in imports widened the current account deficit, and international currency reserves plunged. Growth is projected to slow substantially in fiscal 2023, reflecting the impact of floods and a foreign exchange crisis, with currency depreciation and supply disruption doubling inflation (ADB, 2023).

Main economic challenges are the results of long-standing structural weaknesses. Pakistan made significant progress towards reducing poverty between 2001 and 2018 when the expansion of off-farm economic opportunities and increased inflow of remittances allowed over 47 million Pakistanis to rise out of poverty. However, this rapid poverty reduction has not fully translated into improved socio-economic conditions, as human capital outcomes have remained poor and stagnant. Moreover, reflecting a consumption-driven growth model, with limited productivity-enhancing investment and exports, strong economic growth often comes at a cost of economic imbalances and frequent macroeconomic crises. Long-term growth of real gross domestic product (GDP) per capita therefore has been low, averaging only around 2.2 percent annually over 2000-22. (World Bank) GDP per capita is low because of population and 174^{th} in world rank. (CIA, 2023a)

The World Bank has highlighted Pakistan's notable improvement regarding the ease of doing business, with the country effecting multiple reforms to speed up and streamline processes for obtaining construction permits, paying taxes online and registering property. However, despite moving up to number 108 in the 2020 ranking (from 136 in 2019 and 147 in 2018), Pakistan remains behind other middle-income economies. Pakistan is similarly positioned (110 out of 141 nations) in the World Economic Forum's latest Global Competitiveness Report, scoring highly for market size but below the South Asia average for many other indicators (GSMA, 2020).

IMF has signed an Extended Fund Facility (EFF) program with Pakistan in 2019 but the objectives of the program could not be achieved due to the natural disasters and pandemic conditions. Pakistan Government and IMF decided to end the program and signed a 9-month stand-by agreement with the amount of 3 billion $ on July 12^{th}. The structural reforms in the agreement includes improving Pakistan's competitiveness and the business environment as key for supporting medium-term growth, private sector development, investment, and job creation. Prioritizing the private sector development, the ease of starting business is a core issue under those reforms (IMF, 2023c).

Figure 3-8 Percentage of Real GDP Growth and Projections



Source: (IMF, 2023c)

Pakistan's exports continue to be dominated by manpower export in the subcontinent, cotton textiles and apparels. Animal and mineral products, prepared foodstuffs, skins are other main export goods. Imports include petroleum and petroleum products, chemicals, fertilizer, capital goods, industrial raw materials, and consumer products (World Bank, 2023k). It is a member of the World Trade Organization, part of the South Asian Free Trade Area agreement and the China–Pakistan Free Trade Agreement. EU is Pakistan's largest export partner and USA, UK, Türkiye, Russia, Saudi Arabia, UAE and Indonesia are the leading trading partners. In 2021 Pakistan was the number 69th economy in the world in terms of total exports and the number 51th in total imports (CIA, 2023a).

Pakistan's economy is navigating through a complex web of challenges and opportunities. Addressing fiscal deficits, inflation, and energy shortages are crucial for sustaining economic stability. Capitalizing on the strengths of its agriculture sector and strategic infrastructure development projects like The China-Pakistan Economic Corridor (CPEC) can potentially fuel growth and set the nation on a path of sustainable economic progress. The economy of Pakistan is the 23rd largest in the world in terms of purchasing power parity (PPP) with its 1,2 trillion $ but 174th in terms of per capita GDP (5.200 $). Services is the main source of GDP with 56,5% share, which is followed by agriculture (24,4%) and industry (19,1%). Main industries are textiles and apparel, food processing, pharmaceuticals, surgical instruments, construction materials, paper products, fertilizer, shrimp. Sugar cane, wheat, milk, rice, maize, potatoes, cotton, fruit are the main agricultural products. (CIA,2023a) One of the key strengths of Pakistan's economy lies in its young and vibrant population. But also, it makes Pakistan a consumption-oriented economy.

Pakistan's economy is currently running with low foreign reserves, a depreciating currency, and high inflation. With high public consumption, economic growth increased substantively above potential in 2022 that led to strong pressures on domestic prices, external and fiscal sectors, the exchange rate, and foreign reserves. These imbalances were exacerbated by the catastrophic flooding in 2022, surging world commodity prices, tightening global financing conditions, and domestic political uncertainty (World Bank, 2023k)

A larger fiscal deficit pushed up inflation despite the tighter strong monetary policy. The consumer inflation jumped to 25.4% in the first 7 months of the fiscal year on higher domestic energy prices, a weaker currency, flood-related supply disruption, and restraint on imports caused by a serious crisis in the balance of payments. Core inflation in rural areas escalated to 17.7% year on year in the first 7 months of 2023 from 9.0% a year earlier, while urban core inflation averaged 14.3% in this period, up from 8.1%. The central bank tightened monetary policy further in response to rising inflation and external imbalances, raising the policy rate by another 200 basis points in the first half of 2023 to 17.0% in January 2023, which was still below the inflation rate. On 2 March 2023, the central bank increased its policy rate by a further 300 basis points to 20.0% to tackle inflation (ADB, 2023).

As a result, Pakistan economy faced with policy tightening, flood impacts, import controls, high borrowing and fuel costs, low confidence, and protracted policy and political uncertainty. The devastating floods, along with difficulties in securing quality fertilizers and animal feed, have reduced agricultural output and labour opportunities for low-income workers. Similarly, dwindling foreign reserves, import restrictions, flood impacts, high fuel costs, policy uncertainty, and the slowdown in domestic and global demand have affected industry and service sector activity. The floods have negatively impacted health and education outcomes especially for rural areas, potentially affecting long-term human capital accumulation. As a result, Economic growth is expected to slow and remain below potential in the medium-term (World Bank, 2023k).

Pakistan's strategic geographic location remains advantageous. As a gateway between South Asia, Central Asia, and the Middle East, the country has the potential to become a regional trade and transit hub. The China-Pakistan Economic Corridor (CPEC) project is a testament to the nation's vision of connectivity, opening doors to enhanced trade opportunities and foreign investments. With an increasing number of tech startups and a burgeoning IT industry, the country is embracing the digital era, fostering innovation, and creating new economic avenues. One of the key challenges that Pakistan's economy has encountered is its fiscal deficit (6,3% of real GDP) (KPMG, 2022). The government has been grappling with a substantial gap between its revenues and expenditures, leading to increased borrowing and reliance on external financial assistance. Furthermore, inflation has remained a persistent concern. Rising prices of essential goods and services have put strain on the purchasing power of the citizens, impacting their standard of living (Anees, 2023). The investment rate in Pakistan has stayed below 20% of GDP since 1991 and has fluctuated around 15% over the last ten years. In recent years, public investment has been around 4% and private investment around 11% of GDP. Both rates are too low to sustain the growth trajectory that Pakistan needs to solve its employment and poverty challenges. The country's energy sector also poses significant challenges. Frequent energy shortages and an increasing demand-supply gap have hindered industrial growth and deterred potential investments.

3.1.4.2 E-Commerce and its impacts to Pakistan

E-commerce has an untapped potential in Pakistan. Digital representation can change the scope of the economy. The government and the private sector have vital roles to play not only in allowing e-commerce to take place but to ensure that it grows and benefits not only SMEs but also consumers. Much of the support to e-commerce depends on having or providing the right infrastructure, regulations and the policy mix allowing e-commerce to thrive (Salik, 2022). The mobile ecosystem plays an increasingly important role in GDP growth, job creation, tax generation and driving productivity gains across primary sectors such as agriculture and manufacturing. International Telecommunication Union (ITU) proposes that, a 10% increase in mobile broadband penetration in Asia Pacific leads to a 1.5% rise in GDP (GSMA, 2020).

E-commerce has a potential to be a major contributor to the economy of Pakistan. Pakistan has governmental plans for quite a long time to inflame its economy and make a strategic plan to accomplish a broad commercialization. Improvements in global internet, pandemic, rise in population and in number of people using internet technology and development of cellular technology in a smart way have supported this mission (Qasim, 2021). Pakistan’s e-commerce market showed as a promising e-commerce market which likely to cross $7 billion in 2022 and $9 billion by 2025 (The Express Tribune, 2023a).

Pakistan's rapidly growing middle class, over 60% youth population and broadband subscriptions of over 100 million, makes it a lucrative destination for e-commerce platforms. The entrepreneurial characteristics of Pakistan people to contribute household income by producing small crafts and home-made food and improvement of technology among young Pakistanis led to flourish e-commerce facilities throughout Pakistan, just 35% rise only in 2021. Current business owners have expanded their business by selling their products and services online along with the physical selling, especially brands. Daraz.pk, Shoppingum.com, Zameen.com and OLX are also among the top E-commerce platforms where anyone can add their product even property to sell and many of the customers are there to negotiate or to purchase the products on the price demanded (Qasim, 2021).

Qasim (2021) lists the benefits and opportunities of e-commerce for Pakistan as; starting own business from home, expanding up your business to global, overcoming time limitations of regular trade, cost saving by not using utilities, purchasing in suitable prices, exploiting new opportunities and ideas, being independent from buyer and seller, securing cash flow by using financial opportunities and creating new employment opportunities. Furthermore, as a global trend, the Covid-19 pandemic has created many new opportunities for growth of e-commerce as offline businesses suffered losses and online businesses grew significantly. The reality is the improving of e-commerce in Pakistan. Based on data published by the State Bank, the number of registered e-commerce business in Pakistan increased from 1,707 in 2019-20, to 3,003 in 2020-21, a 76% increase. Pakistan was the 37th largest market for e-commerce with a revenue of USD 5.9 billion in 2021. But still Pakistan have a long road to go; only 2% of the retail market is occurred through online business (Salik, 2022).

Less internet connection rate among cellular users are one of the main obstacles in e-commerce. Access to connectivity and affordable devices are two factors behind this. However, increasing the availability of relevant local language content, ensuring privacy and security, addressing gender imbalance issues and improving digital literacy rates will also be critical in reducing the current differential and accelerating the digital economy (GSMA, 2020). Lack of trust, slow adaptation of payment methods, payment frauds, lack of experience of internet shopping among people in line with limited feedback from users, problems in maintaining online business and imposition of taxes can be the main reasons for the lack of development of e-commerce in Pakistan (Qasim, 2021). In addition, cyber security problems, unskilled labor and less competition can be added to e-commerce problems (Salik, 2022). UNCTAD B2C E-Commerce Index 2020 shows that 7% of Pakistan internet users buy anything online in 2019, which means less than 2 Pakistanis have bought something from internet. This figure shows a decrease of country’s index ranking in 2020 from 116 to 114 in 2020 (UNCTAD, 2020). But the year of 2019 is an important milestone in Pakistan’s Digital Economy. Pakistan Government is declared a policy framework for E-commerce with primary focus on;

- Regulatory and facilitation framework,

- Financial inclusion and digitization through payment infrastructure development,
- Empowerment of youth and SMEs through e-Commerce,
- Taxation issues,
- Consumer protection in the digital environment,
- ICT sector and telecom services in Pakistan
- Logistics
- Data protection and investment and
- Global connectivity and multilateral negotiations.

A National E-Commerce Council has been constituted "as a single window for policy oversight to facilitate e-Commerce players". "The recommendations in the policy framework have been proposed with the objective of providing an enabling environment to the private sector, enhanced employment opportunities to youth, women entrepreneurs including SMEs, while allowing the government to regulate e-Commerce sector for the benefit of the public at large." (Government of Pakistan, 2019). The Policy's main goal is to achieve the comprehensive growth of the industry and the economy as a whole and effectively tackle the obstacles faced by the e-commerce industry in Pakistan by concentrating on the following areas: job opportunities, interregional connectivity, an improved and effective domestic market to compete both domestically and internationally, women's economic inclusion through the support of small-scale businesses, and an adequate framework for market competitiveness (Iqbal, 2023).

The e-commerce industry in Pakistan is experiencing significant growth, with an increasing number of businesses and consumers taking advantage of the convenience and accessibility of online shopping. However, the regulatory landscape in the country must clear obstacles to the industry's continued expansion, including issues with payment processing, taxation, consumer protection and cybersecurity. The Policy is a major development in addressing some of the issues faced by the e-commerce industry as it aims to tackle these issues with a comprehensive approach covering areas which slow down the pace of growth and development. The effective implementation of the Policy will require collaboration between government regulators, e-commerce businesses and other stakeholders, as well as a commitment to developing and enforcing regulations which support the growth of a safe, secure and reliable e-commerce industry in Pakistan. By working together to overcome these obstacles, Pakistan can unlock the full potential of its e-commerce industry, driving economic growth and creating new opportunities for businesses. According to a report produced by the State Bank of Pakistan, there has been a 76 percent increase in the registered e-commerce merchants in Pakistan from 1,707 in 2019/20, to 3,003 in 2020/21, in a single financial year (Iqbal, 2023).

One of the most successful examples in Pakistani e-commerce platform, dawaz.pk was founded in 2012 by two university students with the support of a German angel investor with 5 employees (Jajja, 2019). Dawaz, the largest sales portal today, was acquired by Chinese Alibaba in 2018, became the industry leader and expanded to Sri Lanka, Nepal, Myanmar and Bangladesh to become the regional leader (Daily Islamabad Post, 2023). Although there are examples such as Dawaz, the Pakistani e-commerce world is monopolized by a few companies and is an industry where global businesses do not exist, except for Chinese Alibaba. According to the official website of Daraz.pk, 200,000 sellers serve 25 million members on the portal. However, it is estimated that only 2% of retail sales are made online (Barrech, 2023). The e-commerce sector has focused mainly on consumer products and accessories. Online customers in Pakistan sell/purchase and gather information on vehicles, computers, financial, food and groceries (Trade, 2022a).

ICT Infrastructure

Electricity and access to the Internet are basic elements of ICT infrastructure. Pakistan urban population has no problem to access in electricity but it is 91,9% for rural area (CIA, 2023a). The Telecommunications sector in Pakistan was deregulated in 2003 which results with an exponential growth. In 2014, the market saw further development with the introduction of 3G and 4G services (GOP, 2019). In 2004, just 3 Pakistani over 100 has a cellular phone. It has raised to 65 in 2014 and 74 in 2019. In 2003, the number of cellular phones was about 5.022.098, whereas it has rise up to 135.762.031 in 2014 and 165.405.847 in 2019 (IBRD-IDA, 2023).

188 million Pakistan residents have cellular lines; 9th most populated mobile people of the world. In 2021, 82 people of 100 may access to mobile phones; which means wholly covered by population where 35% of total population is under age 14. 90% of Pakistanis live within areas that have cell phone coverage and 50% of them has broadband connection. 4G services are broadly available and 5G is under testing process. However, only 21% of the population has an internet access, ranking 21st among world countries (CIA, 2023a). To support Telecommunications and Digital Economy infrastructure, Pakistan Government has launched a program to open and run Software Technology Parks (STP), especially in big cities, like Lahore, Karachi and Islamabad, where 90% of IT sector companies are located in. In 2022, 7 new has been added to 25 parks in order to support companies in the sector with backup power and high-speed internet (Ahmad, 2023).

The Information and Communication Technologies (ICT) sector provides significant contributions to the Pakistan economy by providing mobile communication and mobile Money services, accelerating economic growth, job creation and service delivery. The total economic contribution of the mobile ecosystem in Pakistan in 2018 was $16.7 billion in value which is equivalent to 5.4% of GDP (GSMA, 2020). Estimates by industry experts place the total size of Pakistan's ICT exports at around US$ 2.5 billion. However, roughly US$ 1 billion is attributed to SME exports in the grey market, and the remaining US$ 0.5 billion is accounted for by freelancers in the IT and IT-enabled services (ITES) space that serve international clients. 30% of exports are software related; the rest of the exports are mainly generated from call centers in 2018 (State Bank of Pakistan, 2019).

Taxation

All types of businesses in Pakistan are subjected to taxation, whether operating online or not. Taxation of e-Commerce platforms has always been a contentious issue between e-Commerce players and the revenue authorities all over the world. On one hand, demand of e-Commerce platforms for tax exemptions seems plausible for their growth and strengthening the economy, on the other hand, tax authorities are rightly concerned about country's revenue base. Likewise, if new technology enabled industry is not allowed the due space to grow, it will not be able to bring its promised benefits to Pakistan's economy. This makes taxation of e-Commerce entities quite a controversial issue to deal with. In Pakistan, taxation structure related to e-Commerce businesses requires certain reforms in the form of harmonization in sales tax rates, avoidance of double taxation and simplified procedures in filing of tax returns (GSMA, 2020).

Currently, provinces are responsible for collection of general sales tax on services. They are applying different general sales tax rates on services and are using different criteria for collection of sales tax; for instance, in case of Punjab Province, the preference is to collect at destination or point of sale, while Sindh Province prefers collecting at the point of origin of services. Current applicable rates of sales tax in Punjab, Sindh, Khyber Pakhtunkhwa and Baluchistan are 16%, 13%, 5% and 15% respectively. In general, the procedures for filing of sales tax returns are also cumbersome and complicated; however, this may not be the case with online business having transactions' data recorded in digital format. Sector-specific taxes, such as those on smartphones, SIM cards and data usage, influence retail prices and may have a strong impact on the poorest consumers, lessening their ability to become mobile broadband subscribers. In Pakistan, telecoms services are perceived as a luxury and are taxed accordingly, which deters both usage and operator investment. For the country's bottom 20% and 40% income groups, the total cost of mobile ownership (TCMO) for both low and medium consumption baskets is above the UN's "1 for 2" target (i.e. 1 GB of data costing less than 2% of monthly income). Moreover, the upfront cost of a handset represents an affordability challenge for those lower-income Pakistanis who do not have access to finance, which otherwise would enable them to pay by instalment (GSMA, 2020).

The government has acted to alleviate some of the tax pressure on mobile consumers, including cutting SIM card taxes by 75% in 2004/2005. It removed the 16% VAT rate on mobile handsets in 2016 – a move that resulted in year-on-year handset sales growth of 25%;19 however, this has since been reinstated. Further, at 31%, tax as a percentage of TCMO is significantly above the global average (19%), while the mobile sector makes a disproportionately large tax contribution relevant to its own economic footprint (GSMA, 2020).

Employment

Labor productivity levels in Pakistan lag behind regional countries and the poor state of human capital is considered a major binding constraint towards achieving the country's export-driven growth and industrialization objectives (State Bank of Pakistan, 2020). Pakistan has a large labour force that stands among the top 10 largest labour forces in the world. According to Labour Force Survey (LFS) 2020-21 employed Labour force increased to 67.25 million in 2020-21 as compared to 64.03 million in 2018-19. The unemployment rate slightly decreased from 6.9 percent in 2018-19 to 6.3 percent in 2020-21. Pakistan is a country with young population thus, there is a need to create enough employment opportunities to absorb the growing labour force, especially the educated youth. The government is cognizant to create an enabling environment for businesses and industries to enhance the employability of youth.

More than 12.4 million Pakistanis have proceeded abroad for employment in over 50 countries through official procedures as of December 2022. More than 96 percent of Pakistani registered workers for overseas employment are in Gulf Cooperation Council countries especially Saudi Arabia and the United Arab Emirates. They are contributing to the development of Pakistan's economy by sending remittances, which is the major source of foreign exchange after exports.

There are more than 3.2 million SME units in Pakistan accounting for 98% of all the enterprises. The sector employs nearly 78 percent of the non-agriculture labor force in Pakistan and contributes more than 30% to Pakistan's Gross Domestic Product (Ahmad, 2023) and the mobile ecosystem in Pakistan directly and indirectly employed 450,000 people in 2018 (GSMA, 2020). E-commerce services are held by companies, as well as, people who called freelancers. Currently, 1.1-1.2 million freelancers are working in Pakistan and they are fetching $1.5 billion in remittances (The Express Tribune, 2023b)

Trade Facilitation and Logistic

Pakistan Customs is the guardian of Pakistan borders against movement of contra band goods and is facilitator of bona fide trade. It provides a major source of revenue to the Government of Pakistan in the form of taxes levied on the goods traded across the borders. It also helps to protect the domestic industry, discourage consumptions of luxury goods and stimulate development in the under-developed areas. Pakistan Customs is governed as a department under Federal Board of Revenue.

Pakistan has bilateral investment agreements with Australia, Azerbaijan, Mauritius, Bahrain, Bangladesh, Morocco, Belarus, Netherlands, Belgo-Luxemburg Economic Union, Oman, Philippines, Bosnia, Portugal, Bulgaria, Qatar, Cambodia, Romania, China, Singapore, Czech Republic, South Korea, Denmark, Spain, Egypt, Sri Lanka, France, Sweden, Germany, Switzerland, Indonesia, Syria, Iran, Tajikistan, Italy, Tunisia, Japan, Türkiye, Kazakhstan, Turkmenistan, Kuwait, U.A.E, Kyrgyz Republic, United Kingdom, Lebanon, Uzbekistan, Laos and Yemen. These investment treaties generally include dispute settlement provisions. Pakistan has free trade agreements with Sri Lanka, China, and Malaysia. Pakistan is also a part of the South Asian Association for Regional Cooperation (SAARC) and has preferential trade agreements with Iran, Indonesia, Türkiye, and Mauritius (Trade, 2022b).

E-government services are limited in Pakistan; there are some government websites to search for tax, etc. or enrollment to university. Information regarding Pakistan custom regulation are available online (Fbr, 2023a). Pakistan Customs has an online service to file imports or exports or to pay custom duties online through the links (Fbr, 2023a).

Pakistan has a 263.775 km road system; however, and 12.131 kilometers of it run by federal government's National Highway Authority. Motorways are a part of Pakistan's "National Trade Corridor Project" and "China-Pakistan Belt Road Initiative," from Khunjerab Pass near the Chinese border to Gwadar in Baluchistan (NHA,2023). National Trade Corridor project connects the port city of Karachi in southern Pakistan to industrial centers in Punjab centered on Lahore and further to Islamabad and Peshawar in northern Pakistan, and links Pakistan with Afghanistan and other Central Asian countries, covering Pakistan's domestic trade flow in the north–south corridor, concluded in 2021 (Asian Development Bank, 2021).

"China-Pakistan Belt Road Initiative" was first announced in 2015 on connecting China with the Chinese-invested Pakistani port of Gwadar through highway, rail and pipeline infrastructure with

3000 km infrastructure, as a part of Chinese Belt and Road Initiative (BRI). It is a 46$ billion-dollar project includes energy investments, infrastructure and social dimensions (Sayed, 2019). Under the project, 809 km motorway has been completed and 807 km is under construction (CPEC, 2023).

Rail services in Pakistan are provided by the state-run Pakistan Railways, under the supervision of the Ministry of Railways. Pakistan Railways provides an important mode of transportation in Pakistan, catering to the large-scale movement of people and freight. The railway network comprises 11.881 km (CIA, 2023a). The waterway network in Pakistan is not sufficient, with Karachi being the only major city situated next to the Arabian Sea. Still, plans are being proposed for the development of the waterways in the country along the Indus River and through the Punjab as it would boost employment opportunities and the economic and social development of Pakistan. "China-Pakistan Belt Road Initiative" includes constructing a new port in Gwadar and connecting the Port to Central Asian countries, which is the shortest access of those countries to a sea line. The complete of the project will bring new opportunities for Pakistan trade and flow of important commodities, such as oil, through Pakistan land, bringing economic benefits and advantages.

Pakistan has 151 airports. There are 108 airports with paved runways, of which 14 have runways longer than 2.500 meters. The remaining 43 airports have unpaved runways including one airport with a runway longer than 3,047 meters. Pakistan also has 23 heliports (CIA, 2023).

In the context of e-Commerce, logistics are the processes of shipping order to customers or transporting an inventory to a merchant. The logistics process keeps a track of goods in transit and up to the point of delivery. Worldwide, e-Commerce companies outsource their logistics to third-party logistics companies (3PLs) that specialize in transport and storage, to make it cost effective, e.g., postal services, private courier service providers and cargo services. In the last 3 decades, Pakistan has developed a reasonably good road infrastructure and 3PLs, both at public and private sector, which in turn have improved reach and reliability of logistics services. Apart from the private sector courier services (3PLs, mentioned above), which are quite efficient and innovative, Pakistan Post has also developed the ability to play an active role in e-Commerce. In January 2019, it launched its first mobile application and export parcel service "EMS Plus" which will facilitate especially small businesses to send their consignments/ parcels abroad to any destination within 72 hours. At present exporters can avail this service for sending their consignments (of 30 kg or below) to Saudi Arabia, U.A.E., Japan, U.K., Thailand and Australia. The most attractive feature of this service is its cost competitiveness with private courier services (Government of Pakistan, 2019).

Finance and Payments

Pakistan is still largely a cash-based, informal economy. The majority of transactions are conducted in cash, except for large ones requiring a bank draft or pay order (Trade, 2022a). The e-commerce in Pakistan was started around two decades ago with an unpleasant ban of the government of the PayPal service in the country. The companies in e-commerce sector have launched services based on cash on delivery methods or bank payment methods. The mobile payment systems also became an important means of money transfer methods (Qasim, 2021). The cash-on-delivery (COD) system is being excessively used among consumers to buy goods online in Pakistan. Nearly ninety percent of online sales are believed to have been carried out through COD (State Bank of Pakistan, 2018). The second option is credit / debit cards. Mobile payment systems are not fully connected with each other or with bank systems, so, payment via mobile wallets is limited. However, there are some third-party service providers, like EasyPaisa or FonePay are trying to fill the gap (State Bank of Pakistan, 2018). For example, dawaz.pk is accepting and all banks are inter-connected with each other through payment service operators.

3.1.4.3 Main Actors and Initiatives of E-commerce Environment

Pakistan has a complete governing mechanism to contribute and regulate the E-Commerce environment. The digitalization efforts and activities of these structures are very important for the development of the e-commerce environment.

Ministry of Commerce: Pakistan Ministry of Commerce is pursuing trade liberalization and facilitation, improving export competitiveness and reducing cost of doing business policies. It aims to achieve higher market access for Pakistani products in existing markets as well as new markets with ultimate aim of improving quality of life of the people of Pakistan. The ministry is the main leading authority in e-commerce issues. It is responsible to create legal, regulatory and facilitation environment, as well as following the e-commerce policy. Consumer protection legislation and regulation is its responsible together with Provincial Governments. Also, it leads and coordinates the meetings of the National E-Commerce Council (MOC, 2023).

National e-Commerce Council: For implementing the measures envisaged in this Policy, the national e-Commerce Council will meet at least twice a year and can form various committees and working groups to oversee the implementation. These Committees will oversee proper implementation of the Policy and, where necessary, will coordinate to resolve any matters among the provinces or between provinces and the Federation. Under the Minister of Commerce chairmanship, the Council includes public and private sector representatives. Role of the Council is to provide strategic direction on policies & initiatives, to monitor e-Commerce collaboration initiatives, to drive & foster coordination in the implementation of programs and initiatives, to create awareness on the importance of e-Commerce towards Digital Economy's growth and to report progress and provide recommendations, relating to e-Commerce development to the Cabinet. (Government of Pakistan, 2019a). Although in policy documents the Council has been established, no news item has been found in web search regarding to Council activities or meeting. The Ministry of Commerce's related website has no document other than the policy framework.

Ministry of Information Technology and Telecommunications: This authority is responsible from ICT infrastructure and telecom services, which is vital for e-commerce. Its main mission is to create an enabling environment through formulation and implementation of policies and legal framework; providing ICT infrastructure for enhancing productivity; facilitating good governance; improving delivery of public services and contributing towards the overall socio-economic growth of the country (Government of Pakistan, 2019b).

State Bank of Pakistan: This is another governmental organization which is responsible from financial inclusion and digitization through e-commerce payment infrastructure. It controls the cross-border payments and regulates digital payments (Government of Pakistan, 2019b)

Federal Board of Revenue: This board is responsible from harmonization of sales tax and simplification of tax filling system. But provincial revenue authorities are main responsible authorities in taxation and tax collection (Government of Pakistan, 2019b).

The Competition Commission of Pakistan (CCP): It focuses on developing rules that concern building the trust of the consumers while ensuring their protection, encouraging fair trade, and preventing deceptive marketing practices towards e-commerce and digital markets, as quoted by Chairperson, CCP (Government of Pakistan, 2019a)

International Cooperation's and Some Initiatives on E-commerce Environment

"China-Pakistan Belt Road Initiative" has been mentioned above. The project is still in progress and needs finance to finish on time. The main contribution is come from Chinese sources. Germany provides support for thousands of apprentices and vocational education institutions to enable them to meet the demands of the labor market. It assists the agencies operating the social security and health insurance system in providing social protection for large numbers of people. Between 2017 and 2020, some 24,000 people (42 per cent of them women) have been trained in a number of occupations that are in demand in the private sector. In the textile sector, where many people find employment, Germany is supporting the Pakistani Government to ensure that labor and environmental standards are upheld (BMZ, 2023a).

USAID partners with the Government of Pakistan to support economic policy reforms that make doing business easier. In particular, USAID is providing assistance to the Government of Pakistan to modernize trade systems and adopt global trade norms, including the rationalization of duties, the streamlining of processes, and the implementation of international trade agreements and conventions. By taking these steps, the Government of Pakistan will reduce compliance costs for businesses seeking to conduct trade.

USAID is working with the Government of Pakistan to establish a National Single Window and e-Payment system for customs and cargo clearance. This will streamline Pakistan's trade and customs procedures by creating a one-stop shop for companies seeking to do business. USAID helped design a new regulatory scheme for the licensing and operation of a warehouse receipts system for selected agricultural commodities. Additionally, USAID has helped the Government of Pakistan to revise its SME Policy. The revised SME Policy has been designed to create an enabling environment for SMEs that triggers private sector growth, generates employment, improves business competitiveness, and increases exports. The improved Ease of Doing Business ranking indicates these efforts have paid off (Usaid, 2023).

UNDP has several programs for training vulnerable groups, such as youth and women to be ready to future economy. 158 people (50 women) in Balochistan received entrepreneurship training, 100 people (25 women) received vocational training. 600 youth, including 120 women learned marketable skills for the digital economy, on software quality assurance and app store optimization. And 1,000 women improved their employability through digital training (UNDP, 2022).

3.1.4.4 Policies, Regulations and Standards

The government in Pakistan has recognized the significance of digital technologies and skills to enhance inclusion, encourage research and innovation, and unlock economic competitiveness. In May 2018, the Ministry of Information Technology and Telecommunication (MoITT) received cabinet approval for Digital Pakistan, which comprises 12 objectives. The policy aims to use ICT as a strategic enabler for sectoral transformation, economic growth and a better quality of life for citizens (GSMA, 2020).

In December 2019, the Prime Minister launched his vision for the flagship Digital Pakistan policy, outlining five important areas of the policy; Access & Connectivity, Digital Infrastructure, e-Government, Digital Skilling & Training and Innovation & Entrepreneurship. Access & Connectivity underlines the internet and the knowledge that comes with it as a fundamental right for all Pakistanis. Half of the Pakistanis do not have broadband internet service in a developed ICT infrastructure. Digital Infrastructure aims to solve Pakistan's problems for companies and for government for an online working style. E-Government principle prioritizes online interaction between government and citizens & business stakeholders over a paperless online environment. Digital Skilling & Training pays attention to existent talent and training future generation for a knowledge-based economy, with an emphasis on specialization and technological capabilities. Innovation & Entrepreneurship principle is about making easier entrepreneurs into the context to fuel the economy to be a global player (GSMA, 2020).

Table 3-8 Objectives of Digital Pakistan Policy

Objective	***Details***
Holistic digital strategy	Create a digital ecosystem with infrastructure and institutional frameworks for the rapid delivery of innovative digital services, applications and content.
Sectoral digitisation	Use of technology in education, health, agriculture and other key socioeconomic sectors
E-commerce	Promote e-commerce by providing an enabling environment in which payment service providers (PSPs) and payment service operators (PSOs) can operate.
Youth, women and girls empowerment using ICT	Initiate specific ICT for Girls programmes for imparting digital skills to reduce inequalities, provide decent work and promote economic growth in line with relevant SDGs.
Promote innovation, entrepreneurship, incubators and start-ups	Generate sustainable innovation, entrepreneurship and employment opportunities for the country's rapidly growing tech-savvy and entrepreneurial youth.
Increase software exports, IT remittances and domestic market	Leverage skills in the IT sector to boost software exports and outsourcing opportunities, as well as expand the domestic market.

ICT ranking of Pakistan	Improve Pakistan's ICT ranking based on international indices and benchmarks measuring the business and innovation environment, infrastructure, affordability, skills readiness and socioeconomic impact.
Digital inclusion	Bridge the digital divide including the urban and rural divide, gender disparity, unserved and underserved areas, and inequality for persons with disabilities (PWDs), by connecting the unconnected with broadband.
E-governance	Ensure efficiency, transparency and accountability by setting up integrated government databases and applications.
Increase foreign and direct investment	Make Pakistan an attractive destination for investment in the IT industries to create jobs and fuel economic growth.
Persons with disabilities	Reduce barriers to online access for PWDs.
Standardization	Coordinate and support standardization efforts, maximize reusability, create synergies and deliver cost effectiveness.

Source; GSMA, 2019

The Electronic Transactions Ordinance 2002 (ETO) is one of the core legislations governing the conduct of electronic transactions. It provides legal recognition to electronic transactions and signatures and also includes provisions preventing fraud in the application of electronic signatures and violation of privacy of information (Iqbal, 2023).

Digital or electronic payments are essential for the ecommerce industry. They fall under the scope of electronic funds, which is governed by the Payment System & Electronic Funds Transfer Act 2007 ('PS&EF Act'). The PS&EF Act defines Electronic Funds transfer to mean: 'any transfer of funds, other than a transaction originated by cheque, or draft, which is initiated through an Electronic Terminal, telephonic instrument, or any other electronic device so as to order, instruct, or authorize to debit an Account'. Further, the term Electronic Terminal is defined as: 'Electronic Terminal' means 'an electronic device, operated by a consumer, through which a consumer may initiate an Electronic Fund Transfer. The relevance of the PS&EFT Act to the e-commerce industry is significant. E-commerce transactions rely heavily on electronic payment systems and funds transfers, and the PS&EFT Act provides a regulatory framework to ensure the safety, security and reliability of these transactions. The licensing of payment system operators, protection of consumer interests and security measures required by the PS&EFT Act are aimed, among others, to build trust and confidence in electronic payment systems, which is essential for the growth of the e-commerce industry (Iqbal, 2023).

The Prevention of Electronic Crimes Act 2016 (PECA), is another relevant legislation for the e-commerce industry in Pakistan as it is the primary legislation which provides for the storage and transmission of personal data. It contains provisions pertaining to unauthorized access to personal data and confidentiality of information. Since electronic transactions require the use of a customer's personal data and information, businesses operating in this sector need to make sure their practices are in compliance with the PECA (Iqbal, 2023).

The Consumer Protection legislations are established separately in the provincial and federal territories. However, it adopts a uniform approach in providing safeguarding measures to the consumers against protection, fraud and other types of abuse in business transactions. The government agency in charge of investigating and prosecuting cybercrime in Pakistan, including e-commerce fraud, is the Federal Investigation Agency (FIA) Cyber Crime Wing. Businesses are required to disclose any instances of e-commerce fraud and adhere to best practices for protection since these rules and regulations are enforced by numerous government organizations and individuals. The legislation does not comprehensively provide for the protection of consumers engaging in online transactions but rather focuses mainly on the safety of consumer products being sold in the provinces. The current regulatory framework does not effectively address the concerns of the e-commerce industry and there remains trust deficit and insecurity amongst the businesses and consumers. A more robust set of regulations need to be developed to provide shelter to e-commerce industry to ensure uninterrupted and smooth progression (Iqbal, 2023).

The e-commerce consumer court in Pakistan is a specialized forum established to address disputes between consumers and e-commerce businesses. The court was created in order to provide consumers with a more accessible and efficient mechanism for resolving disputes, particularly in the rapidly growing online shopping industry. Overall, the e-commerce consumer court in Pakistan serves as an important tool for protecting the rights of consumers and promoting fairness and transparency in the online shopping industry. It provides a quick, cost-effective and accessible means for resolving disputes, and helps to build trust between consumers and e-commerce businesses (Jabbar, 2023). The implementation of the aforementioned laws has been slow, and enforcement remains a challenge. Dispute resolution in e-commerce is another important aspect of the regulatory framework. Intellectual property rights in e-commerce are also a concern in Pakistan. The Copyright Ordinance 1962 and the Trademarks Ordinance 2001 provide a framework for the protection of intellectual property rights in e-commerce. However, the enforcement of these laws remains a challenge.

Pakistan’s legal and regulatory framework for e-commerce is still in the process of development, and there are currently no specific laws governing the sale of goods and services over the internet. Additionally, the lack of a robust infrastructure for online payments and the limited availability of secure shipping options make it difficult for e-commerce businesses to operate in Pakistan. Furthermore, the country’s weak intellectual property laws also pose a challenge for e-commerce businesses, as they are not well-equipped to protect against intellectual property infringement. (Jabbar, 2023). The Pakistan Standards and Quality Control Authority (PSQCA) is the national standards body. The functions of PSQCA include the establishment and enforcement of national standards, registration of inspection agencies, and assessment of industrial raw materials and finished products for compliance with international standards.

PSQCA has been designated to facilitate the exporters/traders/ manufacturers in the country and importers from WTO member countries. This enquiry point is responsible to disseminate information on notifications, deals with queries regarding standards, technical regulations, and conformity assessment procedures (Trade, 2023c).

Government of Pakistan serves some e-governance facilities to her citizens. In October 2022, the Electronic Government Directorate (EGD) has been established, converting the former Information Technology Commission. the Government formed the EGD as a cell within the Ministry of Information Technology. The focus of EGD includes infrastructure development of government departments, implementation of wide area networks, maximum usage of technology in delivering public services. The objectives of e-government are to;

• Create more accountability and transparency in the public sector
• Modernize public services in which joined-up Government institutions communicate and work more effectively and efficiently
• Increase responsiveness of Government sector in delivering public services
• Bring Government close to citizen by providing them with easier access to information through personnel computers, kiosks, telephone and other resources.
The above information was taken from the Directorate’s official Linkedin account, as its official website (http://www.e-government.gov.pk/) has not been reached.

Enterprises can find online information regarding government services in related websites and may pay taxes through e-government services. A new company can be established through internet website (Eservice, 2023). On the other hand, when checked the major cities’ chambers (Karachi, Islamabad, Lahore), none of them has online services directed to enterprises. According to UN E-Government

Development Index, Pakistan is 150th country in the world among 193 member countries with a middle grade (UN, 2022).

The regulation of e-commerce in Pakistan is still in its early stages and there are several legal issues related to online transactions that need to be addressed. Consumer protection, dispute resolution, and intellectual property rights are among the key areas that need to be addressed to foster the growth of e-commerce in Pakistan. The government has taken steps to address these issues, but more needs to be done in terms of enforcement and implementation of the laws and regulations. (Jabbar, 2023)

3.1.4.5 Conclusion of Review

- Considering its e-commerce infrastructure as a country that has experienced economic, military and geographical problems, Pakistan is a country that has achieved great growth in a short time. It has important potentials for the development of e-commerce with its strategic location, proximity to intercontinental ICT infrastructure. Widespread insecurity, inadequate regulatory frameworks, are constraining the growth of the private sector. Pakistan needs to develop a broadband plan and provide frameworks for infrastructure investment and implement key policy, legal and operational frameworks and public infrastructure that support the secure scaling of digital services. But the government to further expand the information and communication technology (ICT) infrastructure across the country and ensure uninterrupted power supply as e-commerce and online business could not grow in an environment of frequent power shutdowns.

- In Pakistan there should be an enabling environment to provide e-commerce growth to the higher level. A huge opportunity of e-commerce is for youth and especially female entrepreneurs who want to do their online business from home. E-commerce can contribute majorly to improving livelihoods people and in building competitive enterprise as well as increasing the shares in global trade. Like other developing countries, Pakistan may lag in the e-commerce world if it does not technologically catch up.

- One of the biggest obstacles is safe and sustainable internet use. Only half of mobile phone users have broadband internet access. Opportunities for customers to view products by entering e-commerce sites from laptop or desktop large screens instead of small-screen mobile phones are limited; It is almost non-existent in rural areas.

- Payment systems exist in infrastructure but are often not found reliable by customers. E-commerce sites cannot offer the payment methods of all existing companies in the market to their customers.

Connections between different payment method, mobile, bank, online wallet etc. are limited. Any GSM operator only allows its own mobile payment method. It is not possible for websites to contract with all businesses in e-finance system. There is no complete link between mobile payment systems and the banking sector. On the other hand, the penetration of banking to the public is also limited. According to the Global Findex Index, it is not possible to make e-commerce payments online in a country where only one in five people have a bank account. Statistics also show that payments are made in cash at the time of delivery.

- Pakistan is fancy in terms of the number of people trained in the field of ICT, as its population is large. However, almost all of the employment in this sector works in jobs that require limited skills such as call centers. Despite having all the institutions that support new entrepreneurs and technology investments, access to finance, lack of venture capital, indifference of traditional businessmen to the sector and monopoly in the sector have difficulties in attracting investors to the sector. It should be evaluated that one of the most successful examples was established with the support of Germany-based angel investment.

- Pakistan seems to have everything for e-commerce with its legal and financial infrastructure, policy strategies and related institutions. But one of the main problems is that politicy papers always target the future, but it is difficult to report the present. One of the main reasons for this is the difficulty of compiling statistics in a country where 60% do business in an informal economy. However, it is observed that the published strategy documents cannot be follow-up and monitored effectively. It is difficult to find information on the Government's official page on what has happened in the following 4-years after the e-Commerce Policy Strategy was published.

- Nevertheless, in an environment where the country's political and security problems are completely resolved, economic instability ends and economic indicators turn positive, the future can be looked upon with hope, as the population, internet use and financial infrastructure are available to ensure the geometric growth of e-commerce.

3.1.5 Somalia

3.1.5.1 Background

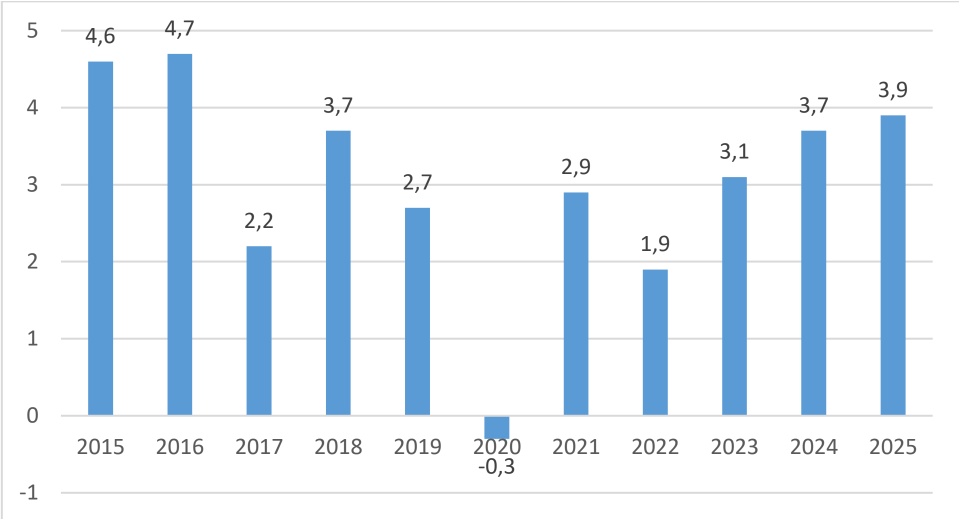
Somalia is situated in the most eastern tip of the African continent known as the “Horn of Africa.” It has been the Gateway to Africa for business and trade for millennia, this makes Somalia a dynamic meeting place where East meets West. Landmass of 637,000 km^2 and the longest coastline of Africa (3,333 kilometers). Somalia has a population of more than 15 million people, also has a diaspora of more than 2 million people worldwide (Sominvest, 2023a). The workforce of Somalia with a population of 16,051 million (MOP, 2023) is 3.042 million people (CIA, 2023b). The unemployment rate in Somalia which is estimated to be 19.86% in 2021 and is the 209th country in the unemployment ranking, was announced as 21.4% in 2022 (MOP, 2023).

Somalia continues to make progress towards reaching the Heavily Indebted Poor Countries (HIPC) Initiative Completion Point in late 2023, following reengagement with the International Development Association (IDA) and clearing of debts to International Financial Institutions. Currently, legislative reforms for HIPC have passed Parliament and negotiations with creditors are in the process of being concluded. Somalia will eventually have the right to debt relief, which could reduce its debt-to-GDP ratio from 41% to 6% in 2022 (World bank,2023e). 2022 Inflation in Somalia is 4.63% (MOP, 2023).

In May 2023, the International Monetary Fund (IMF) Board of Directors completed the fifth review of the Extended Credit Facility (ECF) arrangement for Somalia. Despite significant challenges, including the ongoing severe food crisis, program performance was satisfactory, with Somalia maintaining its strong reform momentum. This resolution authorizes the immediate payment of approximately US$9.4 million to Somalia to support the implementation of Somalia's National Development Plan and for HIPC reforms (IMF, 2023b).

The Central Bank of Somalia has recently integrated the International Bank Account Numbers (IBAN) into the National Payment System (NPS), which is expected not only to streamline payment processing and mitigate operational risks, but also to support the ailing economy. A new currency should also be introduced soon, boding well for the weak monetary policy in the war-plagued country (Nor, 2023). As Somalia continues to restructure its economic institutions, can get benefit various opportunities such as rapid urbanization, increased use of digital technologies, planned investments in energy, ports, education and health. However, severe drought, rising food prices, falling exports and slowing growth in remittances hinder the recovery of the economy. GDP, which increased by 2% on average from 2013 to 2020, decreased by 0.2% in 2020 due to the crises. GDP growth is projected to rise to 2.8% in 2023 and to 3.7% in 2024 (World bank,2023e). In order for Somalia's neighbors to reach the level of development, it must reach growth rates of more than 10 percent (BMZ, 2022). Somalia’s economy has shown resilience and recovery from the multiple shocks from the COVID-19 pandemic, floods, drought, locust invasions, and insecurity. The economy recorded progress in GDP in 2015 and 2016 with growth rate of 4.6% and 4.7%, mainly attributed to the increased volume of livestock export, which is an important driver of Somalia's economic growth.

Figure 3-9: Percentage of Real GDP Growth and Projections (2015-2025)



Source: MOP, 2023

The main imports include food, fuel, building materials, manufactured goods and pharmaceuticals, while the main export items are camels, cattle, sheep, goats, animal hides, leather, oilseeds and fresh or dried limes and lemons. The main trading partners are Ethiopia, Oman, Saudi Arabia, India, Kenya, China, Yemen, Pakistan and Türkiye (MOP, 2023).

In 2021 Somalia was the number 168 economies in the world in terms of total exports and the number 139 in total imports. The top exports of Somalia are Sheep and Goats ($201M), Gold ($94.9M), Bovine ($35M), Other Oily Seeds ($32.8M), and Insect Resins ($28.9M), exporting mostly to Oman ($180M), United Arab Emirates ($138M), Saudi Arabia ($45.2M), India ($15.3M), and Bulgaria ($10.5M). The top imports of Somalia are Rolled Tobacco ($481M), Raw Sugar ($345M), Other Vegetables ($255M), Broadcasting Equipment ($220M), and Rice ($197M), importing mostly from United Arab Emirates ($1.53B), China ($1B), India ($699M), Ethiopia ($361M), and Türkiye ($347M) (OEC, 2021). It is seen that OIC countries are among the important commercial partners of Somalia.

3.1.5.2 E Commerce and its impacts to Somalia

Businesses in Somalia have started testing various e-commerce models since 2013. Despite various problems in the country, e-commerce has become an alternative for both consumers and service providers due to visionary entrepreneurs and young businessmen (Arabow, 2022). In the beginning, many suppliers and factories were not willing to trade digitally, there were no smooth and reliable payment systems in the country, poor road and transportation infrastructure, difficult (late) and costly postal services and deliveries caused difficulties in providing products. The inability of Google Maps to receive and recognize locations in Somalia made the ordering process even more complicated. It wasn’t just factories and suppliers having cold feet towards e-commerce. Even consumers, though excited, still had misgivings about e-commerce. As internet connectivity has grown better and more reliable, and mobile phone access and ownership has increased, the number of people in Somalia, both young and old who rely on e-commerce as opposed to traditional shopping has increased exponentially. And as users got comfortable with e-commerce, more and more entrepreneurs set up elegant and reliable e-commerce platforms offering different shopping or service provision experiences to the public. Whether it is booking flights, or ordering lunch, or buying drugs for a sick patient, or purchasing household items, or acquiring vehicle spare parts; there is an e-commerce platform that can provide it. Today, e-commerce has become ubiquitous in Somalia, with almost every company, despite having physical shop locations and service points, still insisting on being part of digital market platforms (Somaliainvestor, 2021).

Problems can often be encountered in logistics, for example, some online product orders may not have a home or postal address that can be followed. Despite the small number of internet users and slow speeds, e-commerce businesses are emerging in Somalia as measures to increase access in the Horn of Africa country come into play. Soomar, the first e-commerce business established in Somalia in 2016, continues to be one of the largest, despite its competitors such as Sami-Online and Hubaal, and is growing day by day (Africanews, 2018a). Soomar executives state that what makes Soomar Online unique is that it has established itself as a source of goods from China, while other platforms are gravitating towards traditional markets known to many Somali citizens, such as Türkiye and the Gulf Countries. (Sina, 2021) Today, it is seen that there are about 20 e-commerce platforms (Fastbase, 2023). As for the explosion of various e-commerce platforms in the country, this trend is unlikely to abate, and consumers will keep reaping the benefits of a vibrant and competitive market (Somaliainvestor, 2021).

The findings of Farah's (2020) research on 300 Somali consumers showed that 88% of the respondents have been using the internet for 5 years. The results show that clothing and accessories (41.3%), computer products and software (12.7%) are priority products purchased from the internet. 48.7% of the participants state that they sometimes use the internet for shopping, 43.7% state that they rarely or never use the internet for shopping, and approximately 7.6% use e-commerce "frequently". Convenience, reputation and lowest trust are the leading factors affecting consumers' online purchasing behavior. Although Somali students think that online shopping is more convenient than traditional shopping, they state that they do not feel safe and comfortable while shopping online.

According to the results of the research conducted with 384 Hormuud Telecom subscribers residing in Mogadishu, the capital of Somalia. There is a positive relationship between online payment facilities and e-commerce, and between customer trust and e-commerce. All in all, it shows that electronic payment can replace paper payment method and customer trust plays an important role in e-commerce in Somalia (Yasin, 2022).

There is no institution directly related to e-commerce in Somalia, data on e-commerce, strategy document on e-commerce, etc. information and documents are not available. Providing data not only for e-commerce but also for traditional commerce is a very important problem for Somalia. For these reasons, Somalia is not included in many comparative international reports. Although the data on e-commerce cannot be accessed, the elements that make up the infrastructure of e-commerce are analyzed under the following headings.

ICT Infrastructure

Electricity and access to the Internet are basic elements of ICT infrastructure. According to 2019 data, only 18% of the total population has access to electricity. (34% of urban residents and only 4% of rural residents have electricity). However, the total mobile phone subscription in Somalia is 8.844 million (2021 estimation), and it ranks 95th in the world with 52 subscriptions per 100 people (2021 estimation). 2.465 million (2021 estimation) people, who make up 14.5% of the population, use the internet. Somalia ranks 129th in internet usage. 119,000 subscribers (2020 estimated) Broadband - fixed subscription. With one subscription per 100 people in broadband internet usage, Somalia ranks 127th in the world (CIA, 2023b).

The Information and Communication Technologies (ICT) sector provides significant contributions to the Somali economy by providing mobile communication and mobile Money services, accelerating economic growth, job creation and service delivery. Currently, there is no government policy to support broadband planning and universal access, and there are gaps in the implementation of the communications law. Other aspects of the digital economy need to be improved, including e-transactions and data protection and cybersecurity. Telecommunication operators seized new market opportunities to take advantage of the growth potential of the digital economy, Access to mobile communication and mobile money services expanded rapidly and one of the most active mobile money markets in Africa was formed. According to the World Bank survey (2017), 73 percent of Somalis over the age of 16 use mobile money services. The main telecommunications and financial services providers in Somalia are closely linked. Somalia has some of the highest levels of mobile money and mobile communications adoption in the region, but one of the lowest broadband adoption levels (around 5 to 10 percent), meaning that mobile money use is likely limited to low value-added services. Expended access to broadband is very important (World Bank, 2022).

The 9th National Development Plan of Somalia considers ICT a national priority in terms of sustainable economic growth, development of other industries and productivity gains (Sominvest, 2021). Somalia also focuses on digital-driven urbanization efforts and these efforts are crucial for the development of E-Commerce (CIA, 2023b) The 2020 IFC survey reveals that the majority (57%) of ICT firms in Somalia had an annual turnover of over 1.5 million USD in 2017/18. The ICT sector is one of the fastest growing sectors in the Somali economy. Costs are generally lower than in other East African countries, and Somalia's large international diaspora has contributed to the growth of the ICT sector, as Somalis abroad keep in touch with their families. Somalia is 7th in the world with the cheapest Internet in Africa. (1GB internet). In 2020, 155 million mobile Money transactions are worth approximately $2.7 billion per month (Sominvest, 2021).

Taxation

Investors and companies are subject to direct and indirect taxes, which include personal income tax, rent tax, withholding tax and corporate tax. Indirect tax types are VAT, customs duty, consumption tax and turnover tax. Somalia's main taxes are Direct Taxes, Corporate Income Tax (CIT), Rental Tax. The income taxes is payable to the Federal Government of Somalia under authority of this Appropriation Law and Law No. 5, November 7, 1966. There is no Income/Payroll Taxes ın Somalia tax up to $200, 6% for $201-800, 12% for $801-1500, and 18% for $1501 and above. The Corporate Income Tax (CIT) or Company Tax is payable to the Federal Government of Somalia under authority of this Appropriation Law and Law No. 5, November 5, 1966. Corporate tax is also taxed gradually. Up to $2399 is tax free, while over $30,000 the tax rate is 30%. The Rent Tax is payable to the Federal Government of Somalia under authority of this Appropriation Law and Law No. 5, November 5, 1966. Rental tax is not charged up to $499, 15% for $500-20,000 and 22.5% for more than $20,000 (Sominvest, 2023b)

Despite the steady progress achieved so far, tax revenues in Somalia are still quite low by international standards and the lowest in Africa, at 4.4 percent of GDP and Customs reforms help Somalia increase tax revenue (Khan§Khan, 2022).

Employment

The emerging e-commerce in Somalia creates thousands of job opportunities every year (Africanews, 2018b). In parallel with the development of e-commerce, the search for personnel and managers to be employed in e-commerce sites takes place in the personnel search pages (Somalijobs, 2023).

In the development of the ICT and E-commerce sector, the education level of both sector employees and beneficiaries from the industries is of great importance. The primary gross enrollment rate (GER) is estimated to be 20 percent, with approximately 3 million primary-aged children (5-14 years) out of school. Administrative data suggests that about 92 percent of children and adolescents within the official age range are not enrolled in secondary school (World bank, 2022). Somalia ranks 197th in the world with education expenditures accounting for only 0.3% of GDP (CIA, 2023b). Literacy rate stands at 53.7% (MOP, 2023). In 2021, it allocates 6% of its GDP to military expenditures and ranks 5th in the world ranking (CIA, 2023b).

Different international initiatives are also carried out to increase qualified employment in the ICT sector in Somalia. Examples of this are the European Union's women's empowerment in the ICT sector (EU, 2023) and the World Bank's initiatives to support employment by strengthening the ICT sector (World Bank, 2017).

Trade Facilitation and Logistic

The Federal Government of Somalia (FGS) wants to replace the existing manual system by installing a software system that will automate the basic functions of the Customs administration. This system is currently expected to provide most of the required customs clearance functions and provide flexibility to expand functionality as Customs reforms progress (Mof, 2019).

The benefits of this IT solution are listed below;

- Management of customs declarations (presentation, acceptance/receipt, registration, processing, archiving);
- Calculation of customs fees, duties and other related taxes;
- Mandatory and additional Customs supporting documents management;
- Providing Cargo Manifest and supporting documents (delivery, receipt, registration, processing, archiving);

• Ensuring efficiency in the execution of controls through Customs Risk Management;
• Allowing information exchange with Traders, Customs brokers, shipping agents, Port Authorities, Commercial
Banks, Central Bank of Somalia and future Somali Government Offices;
• Performing internal controls on collected Customs duties, taxes and other issues,
• improving the security of the supply system. .
• Adaptation of Somali customs systems with WCO standards (Mof, 2019).

Preparations for this initiative, which will also accelerate the development of e-commerce, are continuing, and promotion and training activities have been started for the relevant parties (Somcas, 2023).

Maritime transport accounts for more than 80 per cent of the volume of world trade. (WTO, 2023e). With the longest coastline in Africa(3333km), Somalia has growing ports and logistics infrastructure. The Somaliland port of Berbera is one of the most modern ports in the Horn of Africa (Sominvest, (2021). Merchant marine has 4 units (2022), including 1 for general cargo and 3 for general cargo, and ranks 170th in comparison to other countries (CIA, 2023b). Piracy off the coast of Somalia has been followed for a long time by different authorities and states. Attempts at maritime piracy have declined sharply since 2013, and no accomplished incidents have been reported since 2017 (Walker § Reva, 2022).

Somalia has 52 airports (2021), ranking 89th in the world in world comparison. (CIA, 2023b). Road logistics is an important sector in the development of trade, especially for underdeveloped and developing countries and Somalia ranks 124th in the world with a total of 15,000 km (2018) of roads.

The Somali National Post is one of the most important departments of the Ministry of Communications and Technology, employing between 1,600 and 2,200 employees nationwide, and its Postal services reach all parts of the country and the world (Posta, 2023). In order to fill the vacuum, the Postal Service later officially re-launched on 1 November 2013, in partnership with Emirates Post to process mail to and from Somalia through Emirates Post's mail transit hub at the Dubai International Airport. Somali Post was member on International Postal Union (IPU) since 1959 (Moct, 2023). In addition, international cargo companies such as Turkish Cargo, Air Cargo Global (ACG) – Somalia and DHL operate in the Somalia.

Finance and Payments

There are 10 commercial banks and 11 money transfer businesses (MTBs) licensed by the Central Bank of Somalia (CBS). Two banking institutions currently provide Master and Visa Cards that consumers can use worldwide transactions. Due to demand from the Somali diaspora, donor sources and foreign investments, money transfer businesses continue to dominate the financial sector, formally as well as informally. The Federal Government of Somalia enacted the Anti-Money Laundering and Prevention of Terrorism Financing Act in 2016, which is critical legislation in boosting financial sector confidence. Online payment transactions and payments are cited by Somalia as one of their main investment offerings (Sominvest, 2023d). Somalia had no government electronic payment system, which meant no rules for transferring funds between banks and other financial institutions and no IT infrastructure supporting it. Somalia's National Payment System (NPS) infrastructure in August 2021 was such a milestone for the country's financial sector. The banking sector in Somalia has demonstrated a strong commitment to digital payments. Payment systems reforms are the first step, and digital payments allow businesses to buy and sell products, social assistance reaches the poorest, and remittances flow across borders. In 2023, ATMs and card terminals in the country will become interoperable. Opening loans to Small and Medium-Sized Enterprises and completing the exchange rate reform are shown as the next most important steps (Bareisaite et al, 2022). These developments in banking and payment systems are very promising for the development of e-commerce in Somalia.

3.1.5.3 Main Actors and Initiatives of E-commerce Environment

Although there is no institution/organization directly related to E-Commerce in Somalia, different institutions and organizations contribute and regulate the E-Commerce environment. The digitalization efforts and activities of these structures are very important for the development of the e-commerce environment.

The Ministry of Trade and Industry (MoCI) is the supreme body responsible for the promotion of trade, the investment climate, and the development of industry and the private sector. He is in charge of various policies such as trade, industry and SME policies, as well as multilateral and bilateral trade relations, promotion of trade and exports, and feasibility studies. The Ministry aims to strengthen the common market of commercial and economic bodies and contribute to the integration of the international economic and trade system of Somalia and the East African region. The ministry also operates as a patent office (Mof, 2022), and it has a wide range of authorization and responsibilities and it has very important functions in regulating and promoting the e-commerce ecosystem. However, at the time of writing the report, it is seen that the website of the ministry has been under construction for a long time (Moci, 2023) and it is very important that the website of the important institution of digital commerce continues uninterrupted.

Somali Company Registry: Somali Company Registry is a portal operated in cooperation with the federal Government of Somalia and the Ministry of Commerce and Industry, allowing businesses to register their establishments online. You can now reserve your company name online and incorporate it from the comfort of your own home or office. It can be checked whether the business name that is desired to be taken during the establishment of the business has been taken online before, if not, it can be reserved, and the payments for the establishment expenses can also be paid online. Useful information and documents related to entrepreneurship are also shared on the website (Ebusiness, 2023).

It is considered that this initiative will provide active information and transparency by encouraging e-government activities, as well as enabling businesses to register online, accelerate the adaptation of businesses to digital processes, and thus be effective in the development of e-commerce in businesses.

The Investment Promotion Office (SOMINVEST) : Pursuant to Article 6 of the Foreign Investment Law of 2015 (Sections 1-8): to encourage foreign investment; the rebranding of Somalia; Established under the Ministry of Planning, Investment and Economic Development to ensure investment inflow and retention and to advocate for improved investment policies, SOMINVEST focuses on targeting sector-specific investors and developing new partnerships to enable sustainable investments in Somalia (Sominvest, 2023c). Not only attracting more investments, but also efforts to improve the investment environment will also improve the e-commerce environment.

The Somali Chamber of Commerce & Industry: This NGO was re-activated on the 3rd of March 2012 after more than two decades of absence or being inactive due to the difficult circumstances in the country, notably lack of security, political instability and civil wars. The chamber is now back in operation and, unlike before, enjoys the full support and acceptance of the hardworking and dedicated business that stayed on and refused to leave the country (Somalichamber, 2023). It is seen that non-profit organizations come to the fore in the e-commerce ecosystem of developed countries. These structures conduct research for the development of the trade and e-commerce system in the country, announce the demands of their member businesses to the relevant parties and follow the results.

Somalia National Bureau of Statistics (SNBS): One of the most important tools of the trading system is the existence of structures that will ensure accurate and fast access to the needed data, and today, in almost every country, statistical data provider institutions are coordinated under an official roof. SNBS is exclusively mandated to conduct the collection, collation, compilation, coordination, analysis, evaluation and dissemination of all National Statistical Information via the establishment and management of a centralized National Statistical System (NSS), as well as conducting national population census, surveys, collection and assembling of socio-economic statistics. SNBS also validates and conducts periodic dissemination of all national statistical information to preclude wastage emanating from duplication of duties and overlap (Nbs, 2023). Although it has a user-friendly website, it is seen that only export and import figures are included in the data set regarding foreign trade (Opendata, 2023).

International Coorperations and Some Initatives on E-commerce Enviroment: Somalia cooperates with different countries and organizations with a focus on developing trade. Somalia is one of the stakeholders of German development cooperation and the main areas of this cooperation are Peaceful and inclusive societies, Transformation of agriculture and food systems, Sustainable economic development, education and employment (BMZ, 2023b).

Another collaborative country example is the USA. Through GEEL program, USAID accelerates Somalia's growing integration into the global economy through a combination of initiatives that improve the country's competitiveness; spur new investments; and increase market linkages and business partnerships. This program aims to boost Somali exports of quality agriculture and fish, increase dairy production, reduce reliance on imports, and increase jobs in regions recovering from years of conflict and recurrent natural disasters. GEEL is leveraging the growing capacities of the government at the federal, regional, and local levels that build foundations that create an enabling environment for businesses to grow. Activities are focused on sectors with high potential across all regions in Somalia and Somaliland (Usaid, 2023).

Another example of Somalia cooperation is the World Bank. The activities of the World Bank in Somalia are centered around three focus areas: Empowering Institutions and Financing Social Service Delivery, Ensuring Inclusive Private Sector Growth and Strengthening Resilience (World Bank, 2023f). One of the most important international projects for the development of digital entrepreneurship in Somalia is the Scaled-Up project. The main objective of the project is to support progress towards basic digital finance and government services targeting entrepreneurship and employment especially for women. This project has three components;

- Strengthening Institutions, stabilizing key government functions that enable individuals and businesses to access services
- Funding project management and coordination activities
- Enabling Financial and Digital Services

There are 4 sub-titles under the title of Enabling Financial and Digital Services. Financial intermediary financing tool for SMEs: Establishment of a Gargaara Company, initially capitalized with US$ 15 million, to increase access to finance for SMEs supporting entrepreneurship and employment Digital identity services: At least 1 million people will be registered to provide greater financial access. Government and retail payment services: The project will finance the integration of mobile money services into the payment switch, allowing communication and integration between different retail payment service providers using interbank payment mechanisms, and e-Registration Services for SMEs will be implemented (World Bank, 2023g). SME's funded $3.7M through Gaargara since June 2020 (Gargaara, 2023).

3.1.5.4 Policies, Regulations and Standards

While strategies for components of e-commerce such as IT infrastructure investments are being produced in Somalia, there is no national e-commerce strategy published directly for E-Commerce and there is no international agreement on E-Commerce.

Participation in international agreements and organizations is very important in the development of international trade. Somalia wishes to participate in regional and international trade arrangements. Somalia returned to the Eastern and Southern African Common Market (COMESA) in 2018. It applied to join the East African Community, and in 2020, the Somali cabinet ratified the African Continental Free Trade Area (AfCFTA) agreement (World Bank, 2021). Although Somalia entered the path of membership with its application to the World Trade Organization in 2016, it is not among the 164 WTO member countries in 2023 (WTO, 2023f). Somalia's Working Party for WTO membership was established on 7 December 2016 but it has not yet met (WTO, 2023g).

Inclusive legislation and practices related to the telecommunication sector are the cornerstones in the development of e-commerce. The adoption of the Communications Law in Somalia in 2017 and the creation of the National Communications Authority (NCA) paved the way for the formalization and regulation of the telecommunications sector. In 2018, the NCA regulator was created as an independent sector and focused primarily on licensing operators. The Unified Licensing Framework

(ULF) was approved in 2020 and the NCA was required to fully license all categories under this framework by August 31, 2021. Mobile money is also allowed to be licensed by the Central Bank. While the NCA provides frameworks on key regulatory issues, many of them are not yet fully implemented (World Bank, 2022).

The Ministry of Post, Telecommunications and Technology (MPTT) has developed the National ICT Policy and Strategy (2019 - 2024) to accelerate Somalia's use of ICT and open up potential for new business opportunities, thereby achieving socio-economic development goals. Based on the Communications Act and ICT strategy, NCA has developed various regulations to provide a more conducive environment for market growth and improvement of socio-economic well-being, which contribute to formalize the sector, monitor service quality, spectrum efficiency, expand infrastructure and promote a competitive environment (Sominvest, 2021).

Businesses in Somalia operate with little or no formal government enforcement, rather than relying on traditional or conventional mechanisms. The companies were regulated under the Italian Civil Code of 1942 and the Somali Civil Code of 1974, enriched by various decrees and directives, were licensed annually by the Ministry of Trade and Industry, and as of the beginning of 2017 only 5,000 businesses were registered, a small fraction of the total number of firms operating informally. Missing or outdated company accounts and ownership meant that suppliers, creditors and customers had to rely on their own sources of information to guide their decisions to do business in Somalia. The Companies Act 2019 updates pre-1991 legislation, providing the regulatory basis for company formation, shareholder rights, directors' responsibilities, liquidation of companies, and financial and operational reporting requirements of companies, and the Companies Law Regulation was enacted in 2021. Improvements in legislation can help firms become formal, which can help them unlock access to finance and investment, thereby increasing output and employment (World Bank, 2022)..

According to the UN ESCWA Report (2021), Somalia does not have a formal or standardized law that governs competition. As an alternative, Somalia relies on a Mixture of Religious and Xeer Courts to handle commerce matters and disputes. Generally, regulations on competition are quite weak, regulations on foreign investments are reasonable, and regulations on anti-corruption are at a basic level. There are no regulations on consumer protection.

Since 2020, the issue of quality and standards has gained importance in Somalia. Somali Bureau of Standards SoBS was established by the Standards and Quality Control Act Law No. 27 in the year 2020 and It has been given authority to control product quality and the safety of consumers (SOBS, 2023a).

SoBS has three important tasks: Inspection, testing and certification and it conducts inspection of goods at all Ports of Entry. Goods found non-compliant with Somali Standards shall be denied entry to the Somali Market. (SOBS, 2023b). SOBS also has Mechanical Metrology Laboratories and Electrical Metrology Laboratories, different tests are carried out in these laboratories (SOBS, 2023c). Primary products and services for Testing are include: Sampling, testing, and analysis (inside the lab), Performance Testing and validation of new products, Environmental monitoring (at client's premises), Proficiency testing, Reference materials, Training, research, advisory, and consultancy services in testing, laboratory quality management systems, quality controls, etc. (SOBS, 2023d). Lastly, Somalia Bureau of Standards (SOBS) provides product certification services by giving serial numbers to products that pass all performance and quality assurance tests and meet the requirements of the specified standards (SOBS, 2023e).

3.1.5.5 Conclusion of review

- Considering its e-commerce infrastructure as a country that has experienced economic, military and geographical problems, Somalia is a country that has achieved great growth in a short time. It has important potentials for the development of e-commerce with its strategic location, long coastline, proximity to intercontinental ICT infrastructure. ,trust-based problems and partly inadequate regulatory frameworks and a lack of correspondent banking relations are some of the factors that are constraining the growth of the private sector. Somalia needs to develop a broadband plan and provide frameworks for infrastructure investment and implement key policy, legal and operational frameworks and public infrastructure that support the secure scaling of digital services (World Bank 2022).

- The Somali e-commerce sector has reached its current level with its own means by overcoming important difficulties such as war and natural disasters. At this point, the government's preparation of a strategic plan for an E-Commerce and its roadmap will quickly pave the way for the sector. The consumer dimension should also be taken into account in the development of e-commerce. Legislative work on consumer protection in Somalia should be accelerated and put into practice. Competition should be regulated along with consumer protection. In the regulation of competition, which is a continuous analysis, programming and evaluation process, there may be a need for regulations on legislative requirements and practitioners. Legislation studies on consumer protection and competition will not only improve the e-commerce system in the country, but also increase confidence in the development of the investment environment in the country. It is important to take part in international agreements and organizations in the development of international trade. For example, although the first steps have been taken to join the World Trade Organization, no progress has been made.

- Data is very important in the development of trade. Nowadays, when concepts such as big data and artificial intelligence are discussed in trade, it is seen that the data shared about Somalia is quite limited. Data collection, analysis and sharing policy should be enriched by reviewing the data sources and data policies of the statistics institution. Data provision, analysis and sharing should be a national strategy. Policy makers, businesses in Somalia and investors who want to invest in Somalia will benefit from these data. The greatest benefit will come from the Somali diaspora, which annually sends approximately $1.3 billion in aid (Diplomat, 2023). It is thought that it would be beneficial for the relevant institutions of the OIC countries to cooperate in establishing an active and sustainable Somalia data system.

- The online service of the customs system and the business registration system are very important steps, and with these steps, the Somali government also demonstrates its intention to adapt to the digital world. As e-Government processes accelerate, the interest of businesses and the public in electronic commerce will increase. The presence and activeness of non-governmental organizations is very important in the development of trade. There are also efforts in this regard in Somalia. Increasing the awareness of these NGOs on E-Commerce and organizing those involved in electronic commerce will be beneficial for the future of the sector.

- Expended access to broadband is very important. Expanded access to broadband will offer significant opportunities for economic growth, innovation and job creation. Currently interconnected by numerous submarines and cross-border terrestrial cables, Somalia must leverage this advanced infrastructure to develop the network that can effectively reach consumers across the country (World Bank, 2022). Education and training are of great importance especially for the communication sector, the information technology sector and the people who will use these systems.

- Although raising the literacy level is fundamental, it is very important to develop technology literacy and to provide training to gain expertise in information and communication technologies. Although there are efforts of different international organizations in this regard, more efforts should be made to improve education and joint projects should be developed, especially by conducting extensive cooperation with OIC countries. In this way, the e-commerce sector will develop, and the development of the e-commerce sector will make it easier and more effective for underdeveloped segments such as women and the disabled to enter socio-economic life.

3.1.6 Tunisia

3.1.6.1 Background

With a strong economy, Tunisia ranks 90th globally and 5th in Africa (GDP). It is a bridge that connects the Arab world and Europe (Worlddata, 2022). Tunisia has a GDP of over $ 46.4 billion at current exchange rates, the fact remains that it is strategically located to reach other African nations. Also, The World Bank's "Ease of Doing Business" index places Tunisia at position 78 (World Bank, 2020b). Tunisia's total population was 12.40 million in January 2023. At the start of 2023, 70.4 percent of Tunisia's population lived in urban centers, while 29.6 percent lived in rural areas (Datareportal, 2023, Türeli, 2023). According to the International Monetary Fund (IMF) data, the Tunisian economy, which grew by 4.4% and 2.5% annually in real terms in 2021 and 2022 respectively (IMF, 2023d). The main imports include mineral oil and fuels, electrical and electronic appliances, machinery and grain, while the main export items are electrical and electronic appliances, textile products, mineral oil and fuels, phosphate, agricultural and livestock products, and olive oil. The main trading partners are France, Italy, Germany, China, Türkiye, Algeria and Libya (OEC, 2023). In the report of the United Nations Conference on Trade and Development "E-Commerce Index for 2020", Tunisia ranked 77th globally (It was 70th in 2019 and 79th in 2018). Also, third place at the African level (second in 2019 and fourth in 2018) (UNCTAD, 2020). Tunisian economy is relatively strong compared to other African states and the country has a high GDP per capita and a low poverty rate.

3.1.6.2 E-Commerce and its Impacts to Tunisia

The growth of e-commerce in Tunisia is expected to persist in the coming years. Additionally, the average Tunisian household spends approximately 12 hours per week engaged in online activities, with social networking, online shopping, and video consumption being the most popular online activities in the country (Demirguc-Kunt et al., 2021, Jribi et al., 2020). Tunisia is the country with the highest internet spending in North Africa, followed by Morocco and Algeria. The ratio of internet spending to all spending is also the highest in Tunisia. The average revenue per user (ARPU) in the e-commerce market in Tunisia was forecast to continuously increase between 2023 and 2027 by 34.6 U.S. dollars (+38.35 percent) and the revenue per user is estimated to amount to 124.85 U.S. dollars in 2027 (Statista, 2023h).

There are some successful online shopping sites in Tunisia and for example Jumia is the most popular online shopping platform, with over 5 million active users and it offers a wide range of products, including electronics, clothing, home appliances, and furniture (Fleck and Richter, 2022). Tayara which second most popular online shopping platform with over 3 million active users is a online classifieds platform that allows users to buy and sell a wide range of products, including cars, motorcycles, furniture, and electronics. Fauna is the third most popular online shopping platform in Tunisia, with over 2 million active users and it is a Tunisian online marketplace that connects buyers and sellers of food and other grocery products (Touil, 2022). In Table 3.8. includes monthly visits for the most popular e-commerce website categories in Tunisia in 2022. Table 3.9 shows the revenue per user of the Tunisian e-commerce market for the years 2018 - 2027.

Table 3-9 Most Popular E-commerce Website Categories in Tunisia (2022)

Categories	Monthly Number of Visits
Electronics	2,499,059
General retailers	2,338,674
Fashion	954,578
Home and garden	245,640
Sport	154,706

Source: Statista, 2022

Table 3-10 Revenue Per User of the E-commerce Market in Tunisia

Year	Average revenue per user in U.S. dollars
2018	62.85
2019	62.07
2020	78.66
2021	91.86
2022	86.88
2023	90.22
2024	101.59
2025	115.7
2026	119.26
2027	124.85

Source: Statista, 2023h

The Merchant Websites Barometer Tunisia is a survey conducted by the Ecommerce Foundation to measure the performance of merchant websites in Tunisia. The survey covers a range of topics, including website design, usability, security, and customer service. Report is published annually and is available to download from the Ecommerce Foundation website.

ICT Infrastructure

In January 2023, Tunisia had a total of 9.80 million internet users. Additionally, there were 16.48 million active cellular mobile connections in the country, which accounted for 132.9 percent of the total population. This indicates that there were approximately 2.60 million individuals in Tunisia who did not use the internet at the beginning of 2023, representing around 21.0 percent of the population (Datareportal, 2023).

The proportion of households in Tunisia with a home computer has shown significant growth, increasing from 21 percent in 2011 to 52.1 percent in 2019. Similarly, the percentage of households with internet access at home rose from 16 percent to 51.5 percent during the same period. Furthermore, the availability of at least a 3G network has significantly improved over the past decade, with the percentage of the population having access to such a network increasing from 65 percent in 2010 to 100 percent in 2019. Individuals residing in major cities like Tunis, Sousse, and Sfax generally experience better bandwidth quality and 4G coverage compared to those in rural areas (Youssef, 2021). Mobile internet generally offers better speed and quality compared to broadband connections (Ookla, 2023).

Tunisia had 7.24 million social media users in January 2023, which accounted for 58.4 percent of the total population. However, it is important to note that social media users may not necessarily represent unique individuals. As of the beginning of 2023, Tunisia's internet penetration rate stood at 79.0 percent of the total population. While the broadband internet infrastructure in the country is performing well, it remains relatively fragile in less populated areas and requires significant investments to improve its coverage and quality (Datareportal, 2023).

Tunisia has a relatively strong mobile capacity, with all three major mobile operators in the country, Tunisia Telecom, Ooredoo, and Orange, offering 4G LTE services. While 5G is available in certain areas, its rollout is not yet widespread. The mobile phone network covers a majority of the country, although there are some rural regions with less reliable coverage. In comparison to other African countries, Tunisia's 4G speed is commendable, but its digital infrastructure still lags behind that of Europe and Asia, necessitating further investment.

Tunisia boasts a well-established fiber optic cable infrastructure that facilitates connectivity with Europe and the Middle East through various submarine cables. The presence of this fiber optic cable infrastructure has enabled Tunisia to offer some of the fastest internet speeds in Africa, opening up new economic opportunities in the IT, telecommunications, and e-commerce sectors. According to the 2021 Global Connectivity Index by Cable.co.uk, approximately 1.3 million households in Tunisia have access to fiber optic internet, accounting for around 25% of all households in the country. This growth trend is expected to continue, leading to further enhancements in internet speeds and connectivity throughout Tunisia.

Tunisia has already taken initiatives in the implementation of Industry 4.0. In December 2020, the HUB I4.0 initiative was set up as part of the Digital Transformation Program in Tunisia. It aims to accelerate the country's transition to Industry 4.0 and to increase awareness of Industry 4.0 in the country. I4.0 competence centers to support the strengthening of the skills necessary for the professions of the future are created (Youssef, 2021).

Taxation

The following taxes apply to e-commerce transactions in Tunisia. A standard VAT rate of 19% is applied to most e-commerce transactions. However, there are some reduced and zero-rated VAT rates for certain goods and services. Customs duties are applied to imported goods, including goods purchased online. The rate of customs duty depends on the type of goods being imported and a stamp duty is applied to certain documents, including invoices and contracts. The rate of stamp duty depends on the value of the document. (PWC, 2023d). In addition to these taxes, e-commerce businesses in Tunisia may also be subject to other taxes, such as income tax and corporate tax.

Employment

The unemployment rate in Tunisia is 16.1% as of March 2023 and the youth unemployment rate is even higher, at 30.7% (ILO, 2023a). The share of youth in informal employment is as high as 87.5% in Northern Africa, far higher than that for adults (61 per cent) (ILO, 2020b, c). Arab states have the highest youth–adult gap in the world in terms of informal employment, which reflects the worsening labor market conditions available to youths compared to older cohorts (ILO, 2020c). The Tunisian economy suffered from serious structural problems, in particular insufficient job creation matching the skills of its university graduates, as well as entrenched regional inequality of opportunity (Alazzawi and Hlasny, 2022). Although Tunisia has relatively developed its economy has not been able to grow beyond low-skilled and low-wage activities. As a result, the newly unemployed have been mainly young and well-educated people. Theoretically, the strong growth in the number of young people could have been a good opportunity for a country thanks to the new savings, investment, growth opportunities, dynamic consumption, additional tax, a high contribution to social security funds. Unfortunately, it can be said that this dynamic did not work for Tunisia (Amara et al., 2022).

The Tunisian government has formulated several national strategic plans, including the recent "Digital Tunisia 2020" plan, which had a budget of 5.5 billion dinars allocated for the period of 2014-2020. The primary objective of this strategy was to position Tunisia as a global digital hub and to emphasize the significance of information and communication technology (ICT) as a crucial driver for the socio-economic advancement of the country. Additionally, the plan aimed to generate 95,000 job opportunities within a span of five years and increase exports from 1 billion to 6 billion dinars by 2020 (AFDB, 2020). However, by 2020, only 25% of the set objectives outlined in the strategy had been accomplished. Out of the more than 72 major projects planned under the "Digital Tunisia 2020" strategy, only 5% had been completed, while 20% were still in progress, and the remaining 75% were still in the conceptual phase (Youssef, 2021). Around 3.5 million Tunisians are in employment, which is average in the region.

Smart Tunisia is another significant national initiative to promote the ecosystem for IT, encourage the growth and development of digital investments, and lay the foundation for the creation of innovative IT leaders both domestically and internationally. For the purpose of fostering employment in the export-oriented digital industry, "Smart Tunisia" is a program created as part of a public-private collaboration for digital businesses. The Tunisian government is committed to helping both domestic and foreign businesses with their growth and development plans (Smart Tunisia, 2023, Taamallah et al., 2019). In 2022 there are about 80,000 Tunisians employed in about 1,800 ICT companies and the Tunisian Tech sector accounts for about 7,5% of the country’s GDP. The government has initiated in 2019 a “Start-up Tunisia” program, aiming at new businesses in the digital and innovative start-up sector and as a result of this efforts in 2023 Tunisia has 13 Incubators and 45 Co-Working spaces (Fricke, 2023). Additionally, Tunisia has an average qualified human resources specialized in IT, every year more than 12.000 student graduates from Universities in IT affiliated departments (UNCTAD, 2018).

Trade Facilitation and Logistic

Tunisia, as a founding member of the World Trade Organization (WTO), ratified the WTO Trade Facilitation Agreement (TFA) domestically in February 2017. Tunisia ranked 105th out of 160 countries worldwide in the Logistics Performance Index (LPI) in 2018. The country's logistics performance is higher in terms of timeliness and monitoring, while logistics efficiency is low due to poor infrastructure and logistics efficiency (Statista, 2023ı).

Tunisia has a total of 8 ports that facilitate international trade. These ports are strategically located in the main commercial centers of the country. Among them, the Port of Radès, situated south of the capital Tunis, the Port of Sfax, the Port of Bizerte, and the Port of Gabes are the most significant. The Port of Radès plays a crucial role in Tunisia's integration into global value chains, as it handles approximately 80% of the country's container traffic. However, the average container stay at the port has increased from 10 days a decade ago to 18 days in 2019, as reported by the World Bank (Sahraouni et al., 2023). This extended duration highlights the inefficiency of the responsible stakeholders in ensuring smooth operations and timely processing at the port.

The Tunisian Customs website offers access to online tariff data, which is also available to professionals in various sectors, including freight companies, through the specialized Intranet called Tunisia Trade Net (Trade.gov, 2021) and the customs authority's website provides instructions on how to access this system. Tunisia's Customs Services have implemented several ICT systems to facilitate trade and commerce like Customs Declaration System (CDS), Automated Import-Export Management System (AIEM), Customs Risk Management System (CRMS) Overall, these ICT systems implemented by Tunisia's Customs Services play a crucial role in simplifying trade procedures, enhancing efficiency, and reducing risks for businesses engaged in international trade (Douane, 2023).

Tunisia's transportation industry has been essential for the development of the nation's economy by utilizing its geographic location at the heart of the Mediterranean. Developing the tourism industry and boosting commerce levels in global marketplaces have both shown to require well-connected maritime and air transportation lines. The foundation of important economic sectors including aviation, automotive components, and agro-industrial processing has been the development of effective transportation networks that connect the nation's manufacturing base with global value chains like those in Europe.

Tunisia's road network spans approximately 20,000 kilometers, serving as a crucial mode of transportation for commercial exchanges with neighboring countries such as Libya and Algeria (Invest in Tunisia, 2023). In Tunisia, the civil aviation industry is crucial to advancing the travel and tourist industry and serves as an economic engine for the country. In fact, this industry generates 2% of the nation's GDP, more than 15,000 direct jobs and 20,000 indirect jobs, as well as supporting regional growth. Additionally, air travel accounts for more than 52% of visitor arrivals (Tunisia Aviation, 2020). The Tunisian e-commerce market is growing rapidly, and the demand for postal and shipping services is expected to continue to grow in the coming years. The companies like La Poste Tunisienne (TPT), Aramex, DHL, FedEx are all investing in their infrastructure and services in order to meet the growing demand. The capacity of these companies to handle online shopping varies. TPT has the largest network of post offices and postal agents in Tunisia, but its infrastructure is not yet fully equipped to handle the volume of online orders. DHL, FedEx, and Aramex have more advanced infrastructure and are better equipped to handle online shopping.

Finance and Payments

There are currently 18 commercial banks operating in Tunisia, as well as a number of Islamic banks and microfinance institutions and online banking in Tunisia is relatively well-developed, with most banks offering a comprehensive range of services through their websites and mobile apps. The online banking applications of these banks are generally well-regarded, with users praising their ease of use and security features. On the other hand, PayPal is not currently available in Tunisia. However, there are a number of other online payment providers that operate in the country, such as Payoneer, Skrill, and Neteller. These providers offer a range of services similar to PayPal, such as allowing users to send and receive money online, make payments to merchants, and withdraw funds to their bank accounts.

Fintech is an emerging sector in Tunisia, contributing to the country's development and creating job opportunities for Tunisians. The Central Bank of Tunisia has taken steps to support the growth of fintech by launching the BCT-fintech website in 2020. This platform provides a more flexible regulatory framework for labeled start-ups, allowing them to develop their activities without the need to relocate abroad. The primary goal of the BCT-fintech initiative is to promote financial inclusion and innovation, as well as drive the digitalization and restructuring of the banking sector in Tunisia. By embracing fintech, Tunisia aims to transform its financial ecosystem and keep pace with global trends in the industry (Central Bank, 2023).

The utilization of e-commerce in Tunisia has historically been limited due to underdeveloped e-payment and m-payment systems. However, the COVID-19 pandemic has prompted a significant surge in online transactions and the adoption of e-commerce by businesses. Many companies have made efforts to adapt their business models and establish an online presence. Despite the challenges posed by the weak payments system, businesses have found alternative methods to reach consumers. The number of online transactions has experienced rapid growth, reaching 6,446,704 in 2020, with a total value of 346,760,950 Tunisian Dinar. Additionally, the number of e-commerce websites has increased to 2,100 by the end of 2020. However, it is important to note that as of January 2020, only 6.6 percent of the population in Tunisia engage in online purchases or bill payments (Youssef, 2021).

The major telecommunications operators in Tunisia have introduced online account systems that enable users to purchase data and phone services using domestic bank accounts and prepaid mobile cards. In May 2015, the digital technology card was launched to facilitate online purchases of software, mobile applications, web services, and publications, particularly in support of entrepreneurial activities. Tunisians also have the option to utilize the e-dinar electronic payment system to purchase various public services. In response to the COVID-19 pandemic, a new mobile payment solution called the digital wallet has been introduced. This allows Tunisians to create a virtual money wallet on their mobile phones, enabling them to receive money and make digital payments (Mbazia, 2023). In Tunisia, e-commerce payment transactions are facilitated through a secure payment server managed by Tunisie Monetique, a Tunisian e-banking company. It is important to note that Tunisian credit cards are only authorized for transactions in the local currency, the dinar, and cannot be used for purchases on foreign commercial internet sites. However, both debit and credit cards can be utilized for domestic internet payments, although cash on delivery remains the most prevalent payment option. In addition to traditional bank cards, the Tunisian postal service offers an electronic payment system called the e-dinar. Customers can establish an account and add funds by purchasing credit at a post office. The e-dinar payment system is widely used for various public services in Tunisia. It is crucial to acknowledge that due to Tunisia's foreign exchange regulations and the non-convertibility of the dinar, there are restrictions on international payments. As a result, Tunisian residents are unable to conduct transactions on international e-commerce platforms such as eBay, Amazon, and AliExpress. These limitations prevent Tunisian consumers from engaging in cross-border e-commerce activities (Trade, 2023d).

3.1.6.3 Main Actors and Initiatives of E-commerce Environment

The Ministry of Trade and Export Development: The Ministry deals with trade, quality control, legal metrology, consumer protection, advertising, competition, prices and economic control Export and import, economic and commercial cooperation, small hand It undertakes the task of drafting and implementing government policy on arts and trade-related services. It has contributed to the implementation of numerous projects and activities aimed at reviving and developing e-commerce activity in Tunisia in all matters related to online sales, as well as facilitating access to information for online merchants (Commerce. 2023).

Ministry of Communication Technologies: The Ministry of Communication Technologies, which was established in accordance with the provisions of 2012-1997 dated September 11, 2012, proposes the general policy in the field of information and communication technologies and supervises its implementation in order to consolidate the role of the sector in economic and social development. To create the national strategy for the sector and to monitor its implementation, It is responsible for establishing programs and procedures for the development and consolidation of the information and communication technologies sector (MTC, 2023).

National Federation of E-Commerce and Distance Selling (SEVAD) is a government agency that is responsible for developing and promoting e-commerce in Tunisia. SEVAD provides a number of services to e-commerce merchants, including, Training and assistance on how to comply with Tunisian e-commerce laws., Help with marketing and promotion, Access to financial support (SEVAD, 2023). One of the projects carried out by SEVAD is the e-Commerce Trust Label (LoC) project. The Label of Confidence (LoC) is a national seal created by the Tunisian government to promote online trade by assisting buyers and sellers on Tunisian e-commerce. The LoC is awarded to e-commerce websites that meet a set of criteria, including:

- Security: The website must use secure sockets layer (SSL) encryption to protect customer data.
- Reliability: The website must have a history of good customer service and delivery.
- Transparency: The website must provide clear and accurate information about its products and services.
- Consumer protection: The website must comply with Tunisian consumer protection laws (SEVAD, 2023).

Merchants who are awarded the LoC are allowed to display the seal on their website, which can help to build trust with potential customers. The LoC is also a valuable marketing tool, as it can help merchants to attract new customers and increase sales. The LoC is a valuable resource for e-commerce merchants in Tunisia. By meeting the criteria for the LoC, merchants can demonstrate their commitment to security, reliability, transparency, and consumer protection and this can help to build trust with potential customers and increase sales.

Export Promotion Center (CEPEX) is an center with more than 40 years of experience in promoting Tunisian exports. Tunisia works to improve the international positioning of its products and services, diversify products and export markets, and encourage exporters (CEPEX, 2023). On March 2023, the Tunisian Post Office (TPT) and the Export Promotion Center (CEPEX) signed an agreement aimed at reducing the costs associated with sending international e-commerce parcels through the FOPRODEX platform. The FOPRODEX platform, an initiative by the Tunisian government, focuses on promoting direct Tunisian exports in the business-to-consumer (B2C) e-commerce mode. This platform offers a range of services to Tunisian businesses, including logistics support, marketing and promotion assistance, and financial support (FOPRODEX, 2023).

International Cooperation's and Some Initiatives on E-commerce Environment: Different projects are carried out in cooperation with different international institutions, some of which are listed below.

Support Project for Small and Medium-Sized Enterprises for Economic Recovery – Word Bank: Tunisia, on February, 2023, received approval from the World Bank Board of Executive Directors for a loan of US$120 million. The loan is designated for the "Support to Small and Medium Enterprises for Economic Recovery" project and the primary objective is to address the long-term liquidity constraints faced by Tunisian firms.

Easy Export Pilot Project: The Easy Export Pilot Project is an initiative launched by the Tunisian government in collaboration with the Universal Postal Union to facilitate international exports for small businesses in Tunisia. The Easy Export Pilot Project is currently being implemented in Kairouan, Tunisia, and there are plans to expand it to other cities in the country in the future. This initiative plays a crucial role in promoting e-commerce and export trade in Tunisia. This project offers a range of services to support small businesses, including:

- Training and assistance for exporting: The project provides training and guidance on various aspects of exporting, such as product identification, market research, documentation, and customs clearance. Small businesses receive the necessary knowledge and support to navigate the export process effectively.

- One-stop shop for export documentation: The project establishes a convenient one-stop shop where small businesses can access the required export documentation. This streamlines the administrative procedures and ensures that businesses have the necessary paperwork to export their products.

- Logistics support: To assist small businesses in exporting their products, the project offers logistics support, including shipping and insurance services. This helps to overcome logistical challenges and ensures that products can be transported to international markets efficiently and securely.

- Marketing and promotion assistance: The project provides marketing and promotion support to small businesses, both online and offline. This includes advertising initiatives to help businesses reach potential customers in international markets, thereby expanding their market reach and increasing their export opportunities (Anson et al, 2022).

Support project for E-Commerce of Tunisian Craft Products: This project was funded by the Enhancing Arab Capacity for Trade (ENACT) program and implemented by the International Trade Centre (ITC) and the Tunisian National Office of Handicrafts (ONA). The project aimed to help Tunisian craft enterprises sell their products online by providing them with training and support in e-commerce. Project ended in 2013 (Artisanat, 2023).

Good Governance and Anti-Corruption in Tunisia Project: The project aims to enhance stability, prosperity and citizens' trust in Tunisia. The project focuses on Public Integrity, Open Government and Public Procurement. With the financial support of the Foreign and Commonwealth Office of the UK, the OECD is implemented this project in coordination with its Tunisian counterparts over a period of 3 years, from 2017 until 2020 (OECD, 2019).

3.1.6.4 Policies, Regulations and Standards

Tunisia National E-Commerce Strategy 2021-2025 was developed by the Tunisian Ministry of Commerce and the Ministry of Communications and Information Technology. Increasing the penetration rate of e-commerce in Tunisia to 20% by 2025, creating 100,000 new jobs in the e-commerce sector by 2025 and turning Tunisia into a regional e-commerce center in the Mediterranean region are the main goals of the Strategy. The document sets out a number of initiatives to achieve these goals, including: To develop a national e-commerce platform. To promote e-commerce education and training. To facilitate access to finance for e-commerce businesses and improving the legal and regulatory framework for e-commerce.

Electronic commerce in Tunisia is under the control of The Ministry of Trade and Export Development and is subject to the same laws governing the commercial sector in addition to special laws (Commerce.gov.tn, 2023): Law No. 2000-83, dated August 9, 2000, on electronic shopping and commerce. Law No. 2009-69 of 12 August 2009 on distribution trade. Law No. 1992-117 of 7 December 1992 on the protection of the consumer. The Law No. 2015-36, dated September 15, 2015, rearranges competition and prices. Law No. 40 of 2 June 1998 on sales methods and commercial advertisements. Decree No. 94-1743, dated 29 August 1994, which determines the methods of conducting foreign trade transactions. Customers' perception of information security is also very important in the development of e-commerce. The audit of the security of information systems in Tunisia is regulated by the Law No. 25-2004 of February 2004. According to this law, information systems and networks of public institutions, General network operators and ISPs, Companies whose networks are interconnected via external networks, Companies that automatically process their Customers' personal data are subject to IT control. The only persons authorized to perform these audit duties are auditors certified by the National Computer Security Agency. In addition, with the Circular on the strengthening of information systems security measures dated 24 November 2020 and numbered 5-2020, a Security Operational Unit should be established in public institutions and a CISO Information Systems Security Officer should be appointed. On November 18, 2020, Tunisia adopted electronic signatures for documents via a new application allowing administrative documents to be electronically signed and adopted by the administration.

The e-government initiative in Tunisia is still in its early stages but holds significant potential to impact businesses and e-commerce within the country. As of 2020 and 2022, Tunisia is ranked 91 and 88 respectively out of 193 countries in the E-government Development Index (UN, 2022c). While there is room for improvement, Tunisia has been striving to modernize public services and leverage ICT in the public sector. One transformative project is the implementation of a unique e-identifier that links individual citizens to all public services. Currently, citizens have multiple identifiers depending on the ministry involved. This project aims to provide each citizen with a single identifier that will persist from birth to 30 years after death, covering all life cycles. Recently, Tunisia launched the GovTech project, which focuses on citizen-oriented public services. This digital transformation project aims to leverage technology in public administration to improve social protection and education systems. The approach places citizens at the center of the reform process and combines innovations in public sector reform, change management, and digital technologies. TUNEPS is a project that has already been implemented and is used to facilitate the publication and submission of public tenders. This system aims to streamline and digitize the tendering process, making it more efficient and transparent (EBRD, 2016). Tunisia also attaches importance to commercial cooperation in the region. The AfCFTA Agreement, which entered into force in May 2019 and was ratified by Tunisia on 7 August 2020, is one of the most important projects of the African Union (AU). Developing commercial relations between the 55-member countries of the Union aims at a total of more than 300 million consumers and a trade market of 3400 billion dollars per year. The agreement also aims to remove customs barriers to the free movement of goods and services between African countries. Tunisia, which has taken an important step towards the implementation of the African Continental Free Trade Area (AfCFTA), has given its first Certificates of Origin to two companies at the beginning of 2023 (TAP, 2023). The certificates play a pivotal role in facilitating trade under the agreement by granting Tunisian institutions access to preferential tariff cuts, ultimately leading to a 0% tariff rate within two years. Tunisia also actively participates in the "Guided Trade" initiative with countries such as Cameroon, Egypt, Ghana, Kenya, Rwanda and Tanzania (AU-AFCFTA, 2023).

3.1.6.5 Conclusion of Review

- While Tunisia has taken important steps towards becoming a knowledge economy (Wipo, 2007) it still faces numerous economic, social, political, cultural, and educational obstacles. The government plays critical role in the digital transformation process (Hanna, 2018). Firstly, it acts as a policy and rule maker, creating an enabling environment for digital transformation. Secondly, it serves as a strategic investor, supporting the application of digital technologies and data to drive transformation in specific sectors. However, in Tunisia, public administration and state-provided services have not played a transformative role in accelerating digital transformation and realizing gains in productivity and value creation.

- Despite progress in e-governance and the establishment of new laws and regulations, Tunisia has not yet reached a critical level of e-government and e-administration. Although there have been good studies on open data in Tunisia recent years, government agencies need to digitize their services more and provide single-door digitized services to citizens (Data, 2023). In this way, citizens will be able to do their business online quickly instead of waiting in line for minutes. Thus, internet use and trust in the Internet will increase in the country.

- With the improvement of infrastructure and the public's trust in the Internet, it will make it easier for people to shop online and for businesses to sell their products and services online. On the other hand to fully leverage the opportunities presented by the information economy, Tunisia must prioritize investment in research and development (R&D), science and technology, and implement projects that encourage innovation and spillover effects across economic sectors. Overcoming traditional institutional and legal barriers will require adjustments to the legal framework to facilitate easy and secure information exchange. Additionally, at the sectoral level, the process of digital transformation in Tunisia exhibits disparities among different sectors. While certain sectors, such as tourism, finance and media, have emerged as leaders in embracing digital transformation, offering advanced e-services and adapting their business models accordingly, other sectors like public administration, agriculture, and construction have lagged behind, with a slower rate of digital transformation. It is crucial for Tunisian authorities to conduct a comprehensive study to understand the reasons behind this discrepancy and identify strategies to promote digital transformation in sectors that have been slower to adopt it.

- To promote e-commerce in Tunisia, it is essential to educate businesses and consumers about the advantages of online shopping. The government can play a crucial role in this by conducting awareness campaigns and offering financial incentives to businesses that engage in online sales. Additionally, the government can consider implementing tax credits for e-commerce and shipping, as well as sponsoring e-commerce events like fairs and conferences. These initiatives will help raise awareness about e-commerce and facilitate connections between businesses and potential customers. Tunisia is a country with the qualified workforce and engineers in Africa. But if we look the other site of the population a significant portion of the Tunisian population lacks specific training to acquire essential skills for using digital technologies, particularly the internet. This includes a lack of knowledge about privacy and security when utilizing digital tools. Additionally, literacy is crucial for effective online engagement, as individuals need to be able to read and write in the digital realm. However, there are disparities in digital technology usage due to overall literacy levels. In January 2021, the literacy rate in Tunisia stood at 79% (Statista, 2023j). Addressing social inequalities in access to equipment and infrastructure is another important aspect. Notably, there is a significant gender gap in internet access. In 2019, 72.5 percent of men had regular internet access compared to 61.1 percent of women (Youssef, 2021). To bridge this digital gender divide, Tunisia should implement strategies that focus on reducing the gap. Providing more opportunities for female workers in the labor market through remote working and e-work can be a valuable approach. By implementing these measures, Tunisia can foster a more inclusive and vibrant e-commerce ecosystem, ensuring that businesses and individuals can fully participate in the digital economy.

- One of the key challenges facing e-commerce in Tunisia is the lack of adequate regulation. Currently, many e-commerce activities are conducted in an informal manner. To address this issue, it is crucial to implement policies and regulations that promote better organization and formalization of e-commerce activities. Tunisia should ensure that unsafe products, which are prohibited in offline markets, are not sold to consumers online. This can be achieved through fostering cooperation between businesses and relevant authorities to effectively address this problem. The development of e-commerce business models in Tunisia should be carefully analyzed, improved, and supported. It is worth noting that many firms are utilizing social networks instead of traditional websites to sell their products, with payments often being made upon delivery. To protect consumers, Tunisia should pass laws and regulations that specifically address e-commerce activities. Another critical aspect to consider is the confidentiality of personal data. Tunisia can enhance its trade relations with union countries by aligning its data protection regulations with the European General Data Protection Regulation (GDPR). As the economy becomes increasingly digitized, it is essential to ensure the safe use of digital technology by both consumers and firms. Cybersecurity policies should be implemented to safeguard public and private infrastructure from cyber-attacks. Specific policies should focus on the use of AI-based cybersecurity systems for detect and response. Addressing concerns related to fraud is crucial to foster trust and confidence in online transactions. Tunisia should take proactive measures to tackle this issue, thereby promoting e-commerce and harnessing the benefits of the digital economy.

3.2 Survey

3.2.1 Methodology

This study is carried out in order to produce policies for the development of e-commerce capacities of COMCEC member countries. It was aimed to participate in the research of 57 COMCEC member countries and in this direction, a questionnaire is created in three different languages. A database of 5.000 e-commerce companies based in OIC countries was created and e-mails were sent to all of this database twice at different times to answer the survey questions. At the same time, through social media, surveys were tried to be delivered to the relevant segments. The organizations/institutions in the e-commerce system in the countries were reached through the COMCEC contact points in the countries. COMCEC contact points were asked both to fill out the questionnaires themselves and to share the questionnaires with the relevant institutions.

In line with the purpose of the research, two separate questionnaires were created on the basis of the institutions and organizations of the relevant countries and the companies. With the questionnaires prepared, it was aimed to understand the factors that motivate the enterprises, to identify the problems they encounter in e-commerce, to compare the problems perceived by the enterprises and the regulatory/supporting institutions. In addition, it is aimed to identify their recommendations for the development of e-commerce in their countries and within the OIC.

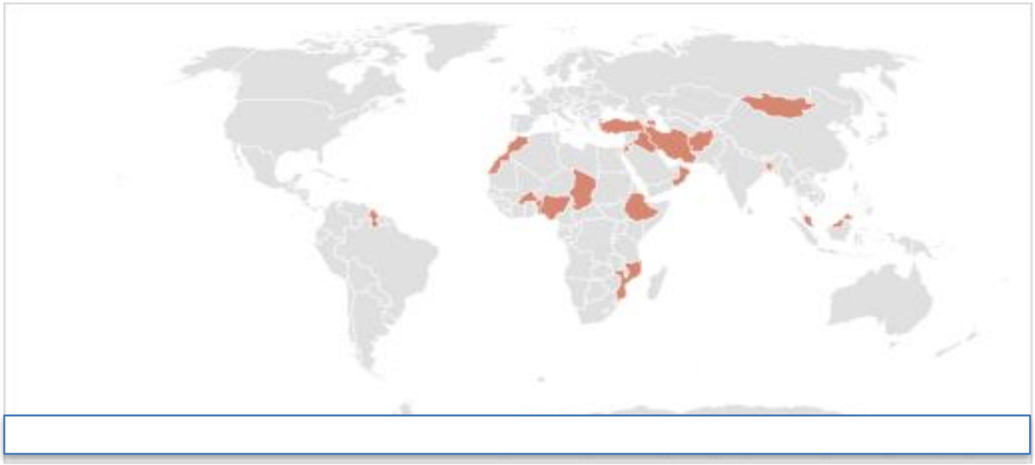
The survey conducted to the companies consists of four parts. The first part is prepared to examine the fields of activity of the survey participants in general perspective. The second part aims to collect information about the factors that lead the participating companies to e-commerce. Here, the e-commerce motivations of the companies were compiled under eight headings and the participants were asked to score these evaluations. In the third part of the questionnaire, it is aimed to evaluate the e-commerce infrastructure of the companies in the member countries in general and in detail. For this purpose, participants were provided with the participation in the survey under two separate headings. In the first stage of this section, the e-commerce infrastructures of the countries were generally represented by seven expressions, while in the second stage, a more detailed infrastructure examination was made. In the second phase of the third part, the e-commerce infrastructures of the countries are represented by twenty expressions and the participants were asked to score these expressions. The last part of the questionnaire applied to the companies includes the suggestions that the participants see fit for the development of their e-commerce capacities in their countries. A three-part questionnaire was created for public institutions and organizations, which are the other branch of the research. In the first part of the survey, it is aimed to collect information about the types of public institutions of the participating organizations and their relations with e-commerce. The second part of the form has been prepared for the same purpose as the questionnaire prepared for the sample of the company and therefore contains the same statements. In this section, it was requested that the public institutions in the participating countries evaluate the e-commerce infrastructures of their countries. The last part of the questionnaire again contains the suggestions of the participants for the development of their e-commerce capacity.

As a result of 5.000 questionnaires sent to companies, social media posts, interviews with business associations and sharing of COMCEC contact points, surveys were completed by 27 companies and 25 institutions/organization officials as of August 5. The survey language was Arabic, English and French (Business: Arabic: 3, English 17, French 7, Total 27; Organizations/Institutions: Arabic 8, English 14, French 3, Total 25). In both sample groups, the Five-point Likert Scale was used in the evaluations of the participants in the questionnaire forms. The data in the study were collected through Google Forms. Cronbach alpha index was used as the reliability for research. The Cronbach alpha values for the questions formed by the Likert scale in the research were obtained as 0.909 and 0.944 for public institutions and organizations, respectively. The Cronbach's alpha values for the Likert questions in the questionnaire prepared for the company sample were calculated as 0.933, .0957 and 0.938, respectively. According to the results of the reliability analysis obtained, the reliability of the research is sufficient. Survey responses are reviewed separately for firms and government agencies. Within both groups, tables and graphs are given. In addition, the questionnaire is evaluated in detail with various statistical analyzes.

3.2.2 Analysis of Survey Findings

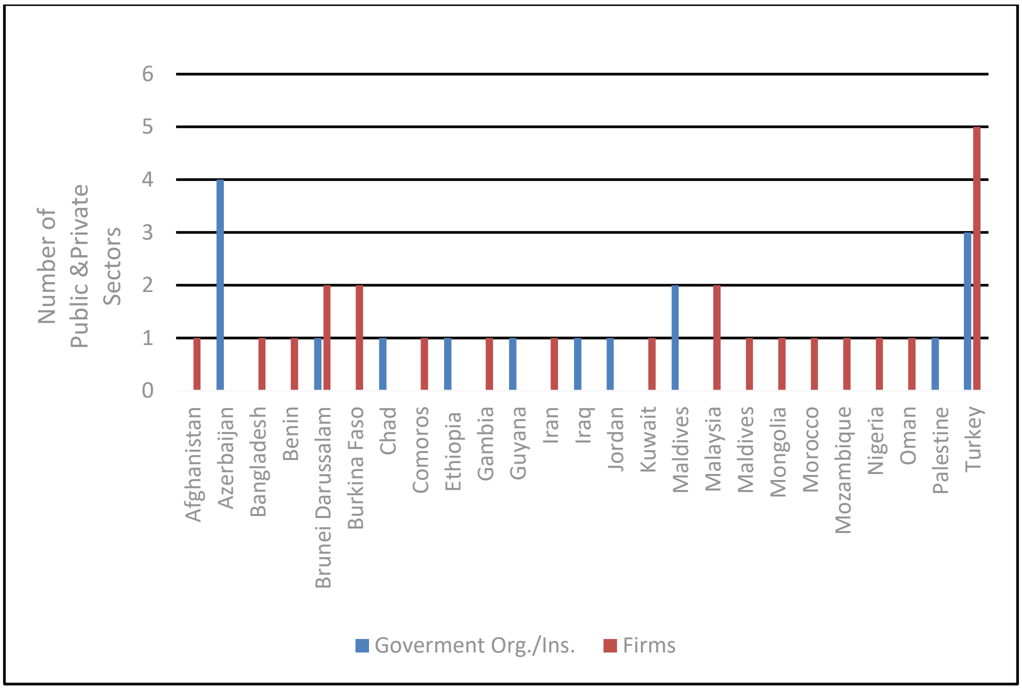
The findings of the survey were obtained from the responses of 27 companies and 25 public institutions participating in the study from 25 different countries.

Figure 3-10 Distribution of Countries Participating in the Survey



Azerbaijan has the highest number of public institutions with four, but no firm from this country has returned to the firm survey. On the contrary, Burkina Faso and Malaysia were the two countries in which public institutions did not participate, but only companies participated the most. Two firms from each country participated in the survey. Türkiye was the country with the highest number of participants in total. With five firms, Türkiye ranks first in company participation, while it ranks two after Azerbaijan with three public institutions.

Figure 3-11Distribution of Participants by Country



Organization/Institution Sample

According to the total of 27 answers obtained, it is concluded that state institutions operate in the field of legislation with a maximum of eleven observations, while they operate in the field of education with at least two observations. In addition, when other responses are taken into consideration, it is observed that all of the fields of activity are supportive activities rather than profit-oriented. Here, too, results are reached in which the informative and guiding functions of public institutions are supported.

Figure 3-12 E-commerce Type of Institutions

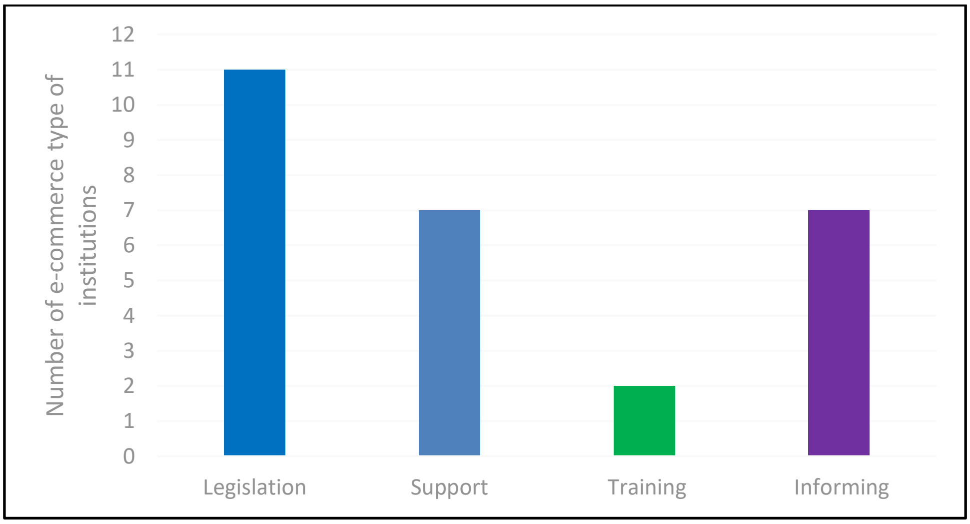
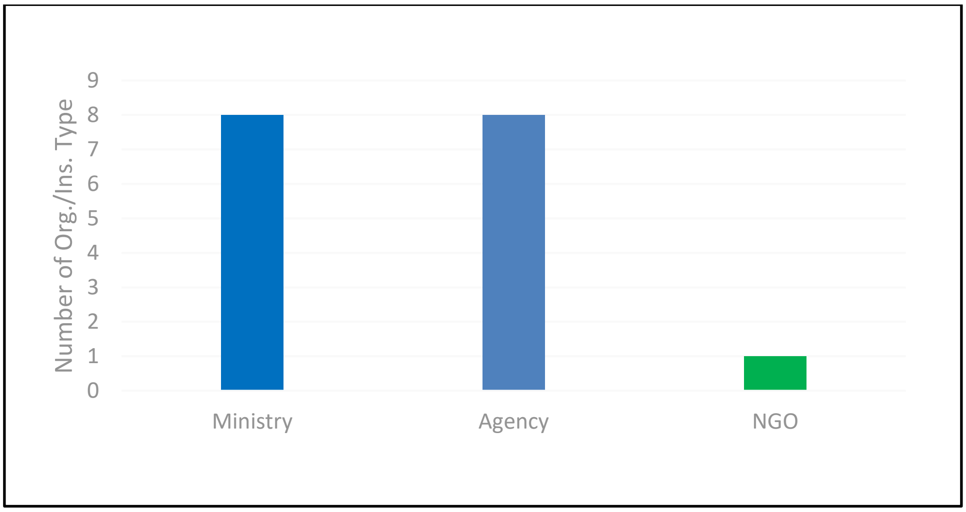


Figure 3-13 Organization/Institution Type



According to Figure 4, it is shown that almost all of the types of public institutions participating in the study are of the ministry and agency type. This coincides with the findings obtained in Figure 3. In order to determine the infrastructure levels in their countries related to e-commerce, seven Likert Scale questions are asked; public institutions under the subheadings of country e-commerce strategy, ICT infrastructure, payment solutions, trade logistic and facilitation, legal frameworks, skills developments, financing SME's. The answers are shown in Table 3.11

Table 3-11 Evaluation of E-commerce Infrastructure in the Country

Infrastructure	Avarege Score	Rank
Country E-commerce Strategy	3,18	3
ICT Infrastructure	3,29	2
Payment Solutions	3,12	5
Trade Logistic and Facilitation	3,53	1
Legal Frameworks	3,00	7
Skills Developments	3,12	5
Financing SME’s	3,18	3

According to Table 3.11 the highest average attitude score is 3,53 for the Trade Logistic and Facilitation subheading. The second highest attitude score is ICT Infrastructure with 3,29. In addition, the sub-title with the lowest average attitude score of 3,00 is determined as Legal Frameworks. With these results, it can be interpreted that there are regulations to be made on behalf of the countries about the legal regulations. The "Payment Solutions" option, which has another low score (3,12), can also be interpreted as a problem that is likely to be caused by a lack of legal regulation related to payment. The average of the scores of all options is calculated as 3,20. Considering that the maximum score is 5,00, these responses generally reveal that countries need to make some improvements in terms of developing their e-commerce infrastructure. These average attitude scores represent the average of the scores that participants gave to each subheading on a scale of 1 to 5. In order to examine the e-commerce infrastructure in the countries in more detail, the participants were asked the questions in Table 3.12 and the average of the answers is obtained and the order of the attitude scores from large to small are calculated. Accordingly, the high-scoring (3,94) sub-heading, it is "People in the country have the skills to use e-commerce". This conclusion indicates that public institutions are in a position to support the statement given above. The lowest scores are with 3 points "E-business skills are sufficient in our business (Business skills, Technology skills)", "There are regulatory barriers to the flow of information in my country" and "In my country, laws and regulations regarding electronic documents and e-signatures are sufficient". According to the results obtained, the participants can interpret that the e-commerce skills of the people in their countries are above a certain level, but there are still some deficiencies on the part of the rule makers. Here, it is expected that there will be a positive change in the attitude scores to these questions with the will of the rule makers.

Table 3-12 Detailed Evaluation of the Electronic Commerce Infrastructure in the Country Under Sub-headings(Org/Ins)

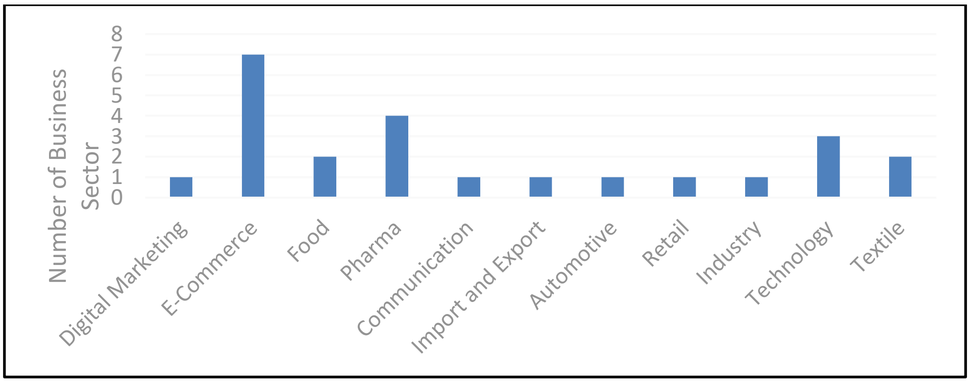
Infrastructure	**Average Score**	**Rank**
There is no problem with digital connection in my country (broadband Internet access, cell phones)	3,18	16
My country follows transparent and pro-competitive policies	3,29	13
There are laws and regulations in my country that facilitate the entry and exit of companies. (Establishment and bankruptcy)	3,82	3
My country has an open trade regime that exposes companies to foreign competition and investment	3,88	2
People in the country have the skills to use e-commerce.	3,94	1
E-commerce businesses can access data on domestic and international trade. (Foreign Market information, export procedures etc.)	3,59	5
There are restrictions on electronic payment instruments in my country.	3,35	12
There are regulatory barriers to the flow of information in my country.	3,00	18
There are reliable shipping and logistics services in my country.	3,76	4

In my country, trainings are given to consumers for the development of e-commerce.	3,41	8
In my country, trainings are given to businesses for the development of e-commerce.	3,59	5
E-business skills are sufficient in our business. (Business skills, Technology skills)	3,00	18
Digital specialist skills are sufficient in our business	3,41	8
Digital user skills are sufficient in our business.	3,12	17
In my country, laws and regulations regarding electronic documents and e-signatures are sufficient.	3,00	18
In my country, regulations are sufficient for electronic payments.	3,29	13
My country has legislation on consumer protection measures such as spam restriction, right of withdrawal	3,41	8
Cyber security measures are being taken in my country.	3,47	7
In my country, there are rules on intermediary responsibility that deal with the legal responsibility of digital platforms.	3,41	8
There are reasonable safeguards for the use of personal information, such as privacy and data protection regulations.	3,24	15

E-Commerce Firms Sample

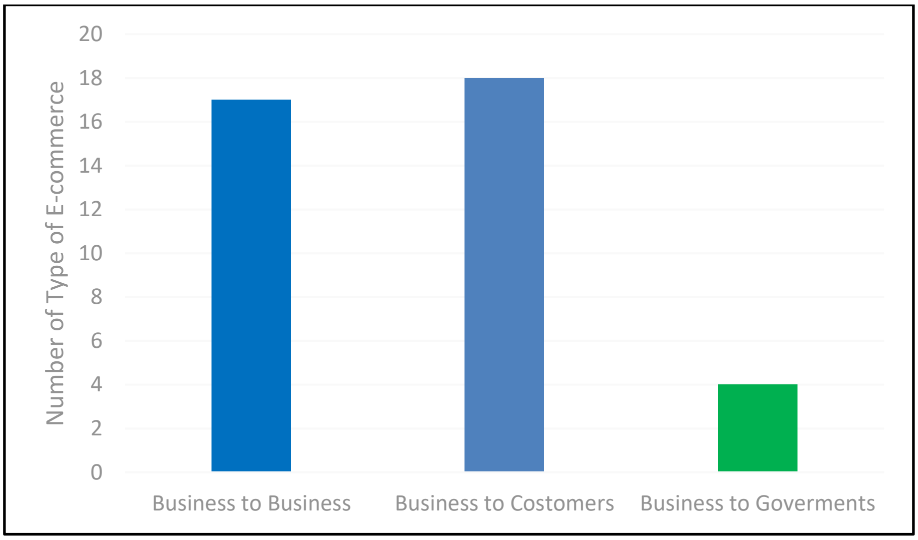
Sector separation was identified for 24 of the 27 companies participating in the study. Here, open-ended questions were asked to the companies and all the answers obtained were grouped later. The results are given in Figure 5. Accordingly, it was determined that the companies from the e-commerce (Traders) and pharmaceutical sector participated in the study. It should not be overlooked that these sectors are also most open to innovation among the customer-oriented sectors.

Figure 3-14 Business sector



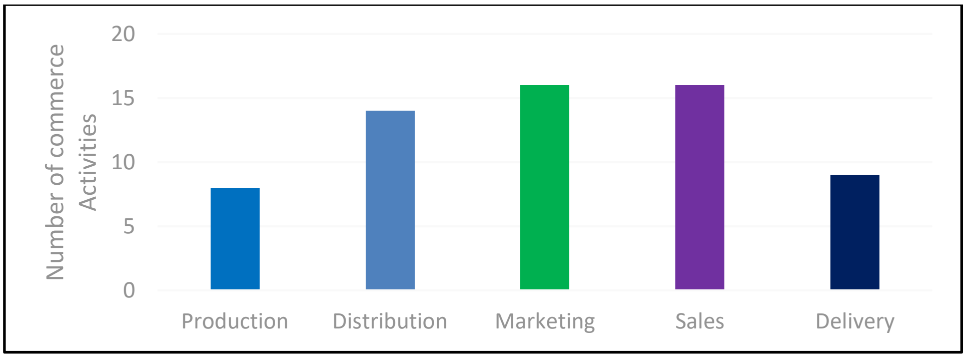
Participant companies are asked about their e-commerce focus. Here, participants have marked the three responses in Figure 6 that suited them. Accordingly, the most response has in the trade made directly to the customer or to another company. The least response has trade to public. Looking at the question in reverse, this result can also be said that customers prefer e-commerce more than the governments. In addition, it can be said that there are more opportunities for customers on e-commerce platforms from here.

Figure 3-15 Type of e-commerce



In order to determine the e-commerce activities of the companies, open-ended questions were asked to the participants and the answers obtained were grouped as in Figure 7. Accordingly, it is determined that the highest observation value was in the field of marketing and sales. Considering that the concepts of marketing and sales are directly related to the consumer, this finding is consistent with the above findings. In addition, the option with the least observation value (8,00) is production.

Figure 3-16 E-commerce Activities of Companies



The companies participating in the study are given statements prepared in the Likert type of five consisting of eight factors to determine their motivations that led them to e-commerce. The highest motivator among these is determined as "Expanding sales to a wider geographic area" with an average score of 4,29. With this finding, it corresponds to one of the main purposes of e-commerce. The factor in the last place was determined as "Cost savings through decreases in personnel" with an average score of 3,63. As a result, it can be concluded that companies see e-commerce as an element that increases their income more than the cost-reducing effect.

Table 3-13 Factors That Motivate Companies to Turn to E-commerce

Motivations	**Avarege Score**	**Rank**
Inexpensively making the company widely known	3,83	5
Cost savings through e-Commerce operations	3,79	7
Cost savings through decreases in personnel	3,63	8
Improving customer service via e-Commerce	4,17	2
Expanding sales to a wider geographic area	4,29	1
Top management’s enthusiasm for using high technology	3,96	4
Maintaining company prestige	3,83	5
Keeping up with technology trends in Business	4,00	3

In this part of the survey, where companies evaluate the electronic commerce infrastructure of their countries, seven factors are again prepared as Five Points Likert Scale. Here, the highest average score is the "Skills developments" factor with 3,04 and the lowest average score is the "Financing SME's" factor with 2,63.

Table 3-14 Evaluation of Electronic Commerce Infrastructure in the Country

Infrastructures	**Avarege Score**	**Rank**
Country E-commerce Strategy	2,71	5
ICT Infrastructure	2,92	3
Payment Solutions	2,96	2

Trade Logistic and Facilitation	2,71	5
Legal Frameworks	2,79	4
Skills Developments	3,04	1
Financing SME’s	2,63	7

In order to examine the electronic commerce infrastructure of the countries in more detail, the firms are asked to score the twenty-one factors in Table 3.15. Among these factors, the highest average score is "There is no problem with digital connection in my first target export country" factor with 3,46, while the lowest score s "My country has legislation on consumer protection measures such as spam restriction, right of withdrawal". The results shown that the least level of satisfaction in e-commerce is caused by the rule-makers.

Table 3-15 Detailed Evaluation of the E-Commerce Infrastructure in the Country Under Sub-Headings

Infrastructures	**Avarege Score**	**Rank**
There is no problem with digital connection in my country (broadband Internet access, cell phones)	3,21	2
There is no problem with digital connection in my first target export country (broadband Internet access, Cell phones)	3,46	1
My country follows transparent and pro-competitive policies	2,96	9
There are laws and regulations in my country that facilitate the entry and exit of companies. (Establishment and bankruptcy)	3,17	3
My country has an open trade regime that exposes companies to foreign competition and investment	2,96	9
People in the country have the skills to use e-commerce.	3,13	4
E-commerce businesses can access data on domestic and international trade. (Foreign Market information, export procedures etc.)	3,04	6
There are restrictions on electronic payment instruments in my country.	2,83	18
There are regulatory barriers to the flow of information in my country.	2,88	16
There are reliable shipping and logistics services in my country.	3,08	5
In my country, trainings are given to consumers for the development of e-commerce.	2,88	16
In my country, trainings are given to businesses for the development of e-commerce.	2,92	13

E-business skills are sufficient in our business. (Business skills, Technology skills)	2,92	13
Digital specialist skills are sufficient in our business	3,00	8
Digital user skills are sufficient in our business.	2,96	9
In my country, laws and regulations regarding electronic documents and e-signatures are sufficient.	2,83	18
In my country, regulations are sufficient for electronic payments.	2,92	13
My country has legislation on consumer protection measures such as spam restriction, right of withdrawal	2,75	21
Cyber security measures are being taken in my country.	2,83	18
In my country, there are rules on intermediary responsibility that deal with the legal responsibility of digital platforms.	2,96	9
There are reasonable safeguards for the use of personal information, such as privacy and data protection regulations.	3,04	6

Comparison of Institutions and Organizations and Companies

In this section, it is aimed to compare the average attitude scores of the electronic commerce infrastructures of the countries obtained from public institutions and firms. Here, the seven factors in Table 3.14 were evaluated by the Mann Whitney-U test, which is a non-parametric test, since the distribution of the groups did not correspond to the normal distribution. Hypotheses to be tested for each factor are given below.

H_0: There is no difference between the average of the attitude scores of the companies and public institutions for the relevant factor.
H_1: There is difference between the average of the attitude scores of the companies and public institutions for the relevant factor.

As a result of the analyzes, a significant difference was found only for the "Trade logistic and Facilitation" factor, with a significance level of α=0.05. There is no statistically significant difference between the average attitude scores for all other factors for firm and government agencies. For the "Trade Logistic and Facilitation" factor, firms attributed a lower level of importance than public institutions. For other cases, there is no different attitude.

Table 3-16 Comparison of the Evaluation of the E- commerce Infrastructure in the Country Between the Firm and the Institution

Infrastructures	Firms of mean	Org./Ins of mean	p
Country E-commerce Strategy	2,71	3,18	,212
ICT Infrastructure	2,92	3,29	,340
Payment Solutions	2,96	3,12	,784
Trade logistic and Facilitation	*2,71*	*3,53*	*,027**
Legal Frameworks	2,79	3,00	,657
Skills developments	3,04	3,12	,837
Financing SME's	2,63	3,18	,114

For a more detailed evaluation of the electronic commerce infrastructure, the average scores of the lower factors, firms and public institutions in Table 3.17 were compared. Here again, since the distribution of the groups has not normal distribution, the Mann Whitney-U test is used. The hypothesis here is the same as the hypothesis established for the comparison of factors in Table 3.17. In the comparison, the significance level is taken as α=0,05. As a result of the analysis, a statistically significant difference is found between the average attitude scores of firms and public institutions for two factors ("My country has an open trade regime that exposes companies to foreign competition and investment" and "People in the country have the skills to use e-commerce"). There was no statistically significant difference between the average attitude scores of firms and public institutions for all other factors.

Table 3-17 Comparison of the Detailed Evaluation of the Electronic Commerce Infrastructure in the Country in Sub-headings Between the Company and the Institution

Infrastructures	Mean of Firms	Mean of Org./Ins.	p
There is no problem with digital connection in my country (broadband Internet access, cell phones)	3,21	3,18	,967
My country follows transparent and pro-competitive policies	2,96	3,29	,410

There are laws and regulations in my country that facilitate the entry and exit of companies. (Establishment and bankruptcy)	3,17	3,82	,068
My country has an open trade regime that exposes companies to foreign competition and investment	2,96	3,88	,009*
People in the country have the skills to use e-commerce.	3,13	3,94	,012*
E-commerce businesses can access data on domestic and international trade. (Foreign Market information, export procedures etc.)	3,04	3,59	,118
There are restrictions on electronic payment instruments in my country.	2,83	3,35	,154
There are regulatory barriers to the flow of information in my country.	2,88	3,00	,691
There are reliable shipping and logistics services in my country.	3,08	3,76	,047
In my country, trainings are given to consumers for the development of e-commerce.	2,88	3,41	,106
In my country, trainings are given to businesses for the development of e-commerce.	2,92	3,59	,107
E-business skills are sufficient in our business. (Business skills, Technology skills)	2,92	3,00	,751
Digital specialist skills are sufficient in our business	3,00	3,41	,244
Digital user skills are sufficient in our business.	2,96	3,12	,602
In my country, laws and regulations regarding electronic documents and e-signatures are sufficient.	2,83	3,00	,826
In my country, regulations are sufficient for electronic payments.	2,92	3,29	,288
My country has legislation on consumer protection measures such as spam restriction, right of withdrawal	2,75	3,41	,084
Cyber security measures are being taken in my country.	2,83	3,47	,085
In my country, there are rules on intermediary responsibility that deal with the legal responsibility of digital platforms.	2,96	3,41	,223
There are reasonable safeguards for the use of personal information, such as privacy and data protection regulations.	3,04	3,24	,549

Survey Participants Recommendations

In this part of the survey, public institutions and organizations were asked about their suggestions on the development of e-commerce for both their own countries and the OIC in open-ended form. There have been eight responses from public institutions and organizations for the development of countries in e-commerce. Three of these answers are that legal arrangements should be made, two are to raise public awareness and information, one is to prepare a legislation on e-commerce and e-signature, one is to develop digital and logistics infrastructure, one is to develop internet and road infrastructure and to solve security problems for foreign investors to come to their countries. One of them has stated that their country has made an improvement in e-commerce and continues to develop. There have been six responses from public institutions and organizations for the development of OIC countries in e-commerce. One of these responses is the provision of physical and legal infrastructure, two of which are the provision of support to vulnerable countries within the OIC, two of which are of sharing information directly or through a digital platform from countries experienced in e-commerce, and one of which is the organization of a campaign to raise public awareness.

In the second part, firms were asked about their suggestions on the development of e-commerce for both their own countries and the OIC in an open-ended form. Thirteen responses came from firms for the development of countries in e-commerce. One of these responses suggested the establishment of a legal framework, the development of the internet and payment network, three of them aimed to inform and raise public awareness by developing a national strategy, two of them proposed to support companies operating in the field of ecommerce, and one of them proposed to ease the permitting processes. two of the responses do not contain any suggestions. There have been ten responses from firms for the development of OIC countries in e-commerce. Two of these responses suggest to the establishment of a common payment platform, two of support for startups, one of increasing digital literacy, two of ensuring effective coordination at the OIC level, one of increasing the level of training of human resources, and two of the acquisition of new markets.

4 KEY POLICIES, STANDARDS AND RECOMMENDED PRACTICES

In this part of the handbook/guideline, standards and recommended practices will be included in line with the information obtained from country examples, field visits and surveys. Standard means a strongly recommended measure which is recognized as inevitable element for establishing, sustaining, controlling and assessment of national e-commerce business. Recommended Practice means identified best practices or the widest possible application of which is considered to be desirable. They are stemmed from the practices or experiences of the OIC on non-OIC Member Countries and proposed to provide choices for the countries to implement the relevant standards.

The key policy area 1: Common language and cooperation framework within the OIC countries

Standard 1: OIC countries should be able to create, analyze and report a common data pool on e-commerce.

Recommended practice 1: A common definition and classification of e-commerce should be determined in the OIC Countries

As pointed out in the first section, there is no common definition of e-commerce in the world. In order to create a common dat pool, first of all, the definition of E-Commerce accepted by all OIC countries should be made. WTO (2017) defines e-commerce as "production, distribution, marketing, sale or delivery of goods and services by electronic means"

According to the WTO definition, every business in the world will need to be considered an e-commerce business. Today, all segments of society are present in electronic environment with short messages, e-mails, social media tools etc. For example, when a business celebrates the holiday of its customers with a text message, it will have made e-commerce according to the definition.

For the development of e-commerce, a definition should be made to distinguish it from other businesses and research, development and monitoring activities should be carried out in accordance with this definition. This definition can be determined by approaches such as turnover, year, the ratio of the variable in all sales, as in the definition of SME or born global enterprise.

Recommended practice 2: Creating a valid and up-to-date database for effective management

Regarding e-commerce data, there are deficiencies within OIC countries, and some OIC countries have no data in international reports, while some countries' data are quite old-dated or based on estimates. It is very important for the development of e-commerce that all OIC countries produce common data in the indicators to be determined jointly. Under the coordination of COMCEC, relevant indicators will be determined in line with the experiences of developed OIC countries in e-commerce.

Recommended practice 3: Establishment of COMCEC E-commerce Info-portal

After providing healthy data flow from all COMCEC member countries, it will be beneficial in the medium and long term to create a common trade portal where these data can be shared, reports can be shared and trainings can be provided. In the long run, this information portal may turn into a common trade portal within the OIC. It is recommended that an e-commerce information platform be established by the organizations where the coordination of e-commerce is carried out in COMCEC countries. In this platform, it will be possible to share data with cooperation with various institutions and organizations, to provide alternative information (market, country, etc.) to enterprises with big data analysis and artificial intelligence applications, to provide information on government support and incentives, and to provide different training documents. Required documents, fees, obligations and restrictions in e-export activities should be shared through this portal. It is also very important that there are forums in the portal where e-commerce users can share their experiences, and that they have the opportunity to ask questions to experts/authorities.

Standard 2: E-commerce activities should be developed among OIC countries

Recommended practices 1: Know-how transfer of developed COMCEC countries to other COMCEC countries in E-commerce

It is seen that some COMCEC member countries such as Türkiye, Saudi Arabia and the United Arab Emirates are quite successful in global e-commerce. Some COMCEC countries, on the other hand, seem to be at the very beginning of the road, although they want to develop the E-Commerce environment. It is recommended to develop mutual cooperation opportunities of member countries on data provision, data analysis, payment opportunities, e-government services, e-commerce strategies, etc.

It is recommended that countries that have lagged behind in e-commerce should clearly state their needs and seek support from developed countries for guidance through COMCEC. Although it is important that a few countries in COMCEC are global players, transferring this experience to all COMCEC member countries will ensure the sustainable growth of e-commerce collectively within COMCEC.

Recommended practices 2: Developing e-commerce project capacity in COMCEC member countries

It has been observed that countries that are underdeveloped in e-commerce cooperate with international projects and carry out projects with non-COMCEC countries. Although the continuation and development of these projects is important, the execution of joint projects with the funds to be provided by COMCEC member countries will also contribute to the development of economic, political and commercial relations within COMCEC.

Recommended practices 3: Encouraging the establishment of an E-Commerce-oriented Non-Governmental Organization

E-Commerce businesses have their own unique problems, opportunities and threats. As in the European example, it is important for the sustainable development of E-Commerce that E-Commerce enterprises in COMCEC come together to follow developments all over the world, share their problems, prepare reports and conduct lobbying activities. The skills of e-commerce businesses in the virtual environment will facilitate the work of this platform, reduce its costs and increase its effectiveness.

Recommended practices 4: The topic of development of E-commerce in OIC countries should be considered as a permanent agenda item at COMCEC Trade Working Group meetings.

In parallel with the developments in the world, e-commerce in OIC countries is gaining importance day by day, and countries are developing different regulations and strategies against different opportunities and threats. It may be useful to consider the development of E-Commerce as a permanent agenda item at the COMCEC Trade Working Group Meetings and to investigate ways to improve by discussing current developments, opportunities and obstacles in terms of developing e-commerce and cooperation in member countries.

The key policy area 2: Politic and Regulatory Framework

Standard 1: OIC countries should effectively manage their E-commerce strategy, policy and programs.

Recommended practices 1: It is important to determine the multi-year e-commerce strategy that will shed light on the e-commerce vision of the country and to share it with the public.

It is seen that countries such as Pakistan and Jordan prepare and share their e-commerce strategy documents with the public. E-commerce strategies, which also show the importance that countries attach to e-commerce, should be formed in a way that covers all relevant areas of e-commerce and with effective stakeholder participation.

Recommended practices 2: Implementation-oriented e-commerce programs should be established, coordination should be ensured and developments should be followed.

It is very important to create a strategy but these studies should not remain in the form of a statement of intent. First of all, short, medium and long-term programs should be determined depending on the strategies. Which activities will be reported by whom, in what time period, by whom, which indicators will be reported in these programs? The answers to the questions should be included in a clear and measurable way and should be shared with the public. A coordinating institution responsible for monitoring and reporting the entire strategy should be identified.

Recommended practices 3: Policies for the provision of more public services through e-government should be followed.

Carrying out services for citizens such as receiving complaints, providing information and documents, as well as operations for businesses such as business registration, customs procedures, tax procedures, through E-government portals will allow the infrastructure, awareness and experience of e-commerce to increase. The online public procurement and tender announcements will also improve the e-commerce potential in the countries.

Recommended practices 4: Online payment facilities need to be developed.

One of the important elements in the development of e-commerce is the provision of electronic payment facilities in a variety of easy and fast ways. Today, one of the most important trends in retail e-commerce is buy-and-pay-to-day campaigns, and it is expected that regulations will be made to facilitate the implementation of these trends. Research within the scope of this study shows that people prefer cash over digital money. Tax reductions and incentives in the use of digital money should be used to encourage the transition to digital money. The transition to digital currency also allows monitoring activities to be carried out as a barrier to informality.

Recommended practices 5: E-commerce businesses should be able to benefit from government support and incentives.

Support and incentives should be developed especially for e-commerce companies, and it should be ensured that e-commerce companies benefit from support and incentive programs that other SMEs also benefit from. These supports may be in the form of tax deductions, covering some expenses (membership to e-commerce platforms, website development, etc.), as well as services such as training, consultancy, mentoring.

Recommended practices 6: Countries should monitor e-commerce platforms, license those that meet certain conditions, and accredit and certify companies engaged in e-commerce on these platforms.

Governments should monitor e-commerce platforms in their own countries, check the registered status and activities of the e-commerce companies and certify these companies. Not only at the beginning, but at certain intervals, it should check the activities of these businesses digitally and physically and cancel the certificate according to the complaints or if the company is not operating.

Recommended practices 7: Especially in countries that do not have developed e-commerce platforms, governments should implement/support the implementation of their own trading platforms.

On these platforms, a good and secure infrastructure can be provided and export-based e-commerce activities can be carried out. Companies with high e-commerce potential but not operating in this field can be invited to the platform. The implementation of trend developments such as artificial intelligence, metaverse and virtual reality on these platforms will provide significant benefits. Ideally, the country's administrations should only support the establishment of these structures, but if there is no tendency, the relevant structures will be able to establish and manage by the authorities.

Recommended practices 8: Developing not only B2C but also B2B should be among the priority strategies.

Although B2C models are generally focused on in e-commerce, the development of B2B models is quite weak. B2B businesses must be registered businesses and should be evaluated differently from B2C. Countries specifically list their export products. However, if the final products are listed in the intermediate goods used and needed while exhibiting, they will be able to receive offers from international suppliers, thus increasing their competitiveness in terms of quality and price. It should not be forgotten that the most effective way of inter-business commerce in developed countries is e-commerce. (Mckinsey, 2021)

Recommended practices 9: Providing physical and online facilities where companies can get information about e-commerce

Especially in countries that are underdeveloped in terms of e-commerce, there are no structures where SMEs can get information about e-commerce. At this point, institutional capacity building is also very important.

The key policy area 3: Legal Framework

Standard 1: Legal frameworks should be regulated up-to-date

Recommended practices 1: Making a general legal regulation on e-commerce environment

A general legislation should be made in order to regulate the principles and procedures regarding electronic commerce in the country. For example, in Türkiye in 2014, the "Law on the regulation of electronic commerce" came into force.

Recommended practices 2: Harmonization and development of laws and regulations in countries to develop e-commerce

Although e-commerce requires its own legislation to be prepared, since e-commerce is directly and indirectly related to many different areas, the legislation regarding these areas also needs to be reviewed and regulated. (review of the criminal law, legislation on consumer demands and the complaint process regarding prohibited substances, etc.)

Recommended practices 3: Making legal regulations on electronic commerce service providers

The purpose of these regulations is to regulate the activities and audits of electronic commerce intermediary service providers and electronic commerce service providers and the commercial relations between them in order to develop an effective and fair competition environment and electronic commerce. Türkiye made these regulations in 2022 (Law number: 32058). Türkiye has made the aforementioned regulations in 2022. In the relevant regulation, information obligations of electronic commerce tool service providers, obligations regarding orders, Unlawful Content and Unfair Commercial Practices, Violation of Intellectual and Industrial Property Rights, Brokerage Agreement, Advertisement and Discount Budget, Electronic Commerce License and There are control headers.

Recommended practices 4: Remote electronic transactions should be regulated up-to-date

The legal recognition of electronic documents and signatures in remote transactions and the regulation of relations is essential for an advanced e-commerce system, especially business-to-business e-commerce. The Model Law on Electronic Transferable Records (MLETR) is very important especially for E-commerce.

Recommended practices 5: Trust building/developing regulations should be made up-to-date.

Regulations significantly support digital markets by promoting trust. The most important reason not to shop online, even in developed markets, is the lack of trust in remote electronic transactions. Consumer protection, intermediary liability, privacy, data protection, and cybersecurity regulations play an essential role in increasing trust

The stages of consumer protection regulation cover three stages, which are pre-purchase, during-purchase, and post-purchase. E-commerce platforms such as Alibaba, eBay, and Trendyol rely on offering products to consumers from thousands of different providers rather than their own stocks, the relationships between the intermediary (websites and applications) and the companies and individuals that offer their own products or services are vital for the functioning of digital transactions. Another issue is privacy and data protection. Data privacy considerations include authorizing all or certain types of persons (also called data subjects) to collect, use, store, and destroy their personal data. Cybersecurity regulation is an essential component in building trust in digital markets.

Considering the COMCEC countries that are left behind in e-commerce, it is seen that there are important deficiencies in making and updating these regulations, and these deficiencies not only reduce the tendency of the citizens of the country to e-commerce, but also prevent the entry of foreign direct capital into the country.

Recommended practices 6: Monitoring and registration e-commerce activities

It is very important to monitoring and registration E-commerce activities in terms of tax collection, prevention of speculation, making plans for the sector, protecting the consumer and the development of the sector.

For example, with the Tax Procedure Law General Communiqué published in the Official Gazette in 2015 in Türkiye, it is obligatory to provide continuous information to certain taxpayer groups within the scope of monitoring and recording e-commerce activities. By the regulation, intermediary service providers, Banks, Internet Advertising Service Intermediaries, Cargo and Logistics Operators Name and surname / title, identity number, tax number information and workplace address information of real or legal persons served, and service sales/rental transactions, the amount and date of each collection or sale transaction and the bank account information regarding the payment of the collected amounts to the intermediary service providers.

Recommended practices 7: E-Commerce activities exceeding certain limits can be carried out by registered businesses.

E-commerce activities should be carried out by invoicing as a business after a certain level. Otherwise, in e-commerce activities carried out as individual commerce, consumers may be victims, they cannot receive state tax and taxpayer businesses may be in a difficult situation. However, forcing people who make their first attempts to become taxpayers may also prevent the development of e-commerce. Especially through the trending social media, e-commerce makes things more difficult. Transition to digital money, big data and artificial intelligence applications are important tools in monitoring e-commerce activities.

The key policy area 4: ICT Framework

Standards 1: ICT infrastructure and Services should be strengthened

Recommended practices 1: Access to electricity, internet and mobile access at the desired quality and affordable price

In some countries, there are problems in accessing electricity and internet. Frequent and long-term power cuts and internet access problems hinder the e-commerce potential of these regions. Although some countries are close to intercontinental data lines, it is seen that there are problems with broadband internet.

Recommended practices 2: Modern ICT infrastructure and services should be able to safely support payment, purchasing, tracking modules in a way to develop E-Commerce securely.

It is important to reach internet connections in a reliable way as well as uninterrupted, fast and affordable access. An environment of trust should be created by strengthening legal regulations and ICT Technical structures.

Recommended practices 3: The ICT sector in countries should be strengthened.

It is seen that the ICT sector, which consists of ICT companies in the countries in general, is the driving force of the economies and foreign capital investments should be encouraged because the sector requires large capital. In order for foreign capital investments to come and increase, legal regulations, incentive mechanisms and an environment of trust must be developed. It is important to develop ICT sector investments in parallel with current technological developments. (Ex: Cloud computing technology, IoT, machine to machine communication)

The key policy area 5: Trade Facilitation and Logistic framework

Standards 1: Trade facilitation performance should be improved

Recommended practices 1: Formalities should be reduced, Appeal Procedures, Governance and Impartiality should be improved.

As recommended by the OECD (2014), trade documents should be simplified and harmonized with international standards and copies of documents should be accepted, electronic data exchange; border controls should be simplified by streamlining automated border procedures and single posting points (single windows) for all required documents should be created. The methods of objection to the administrative decisions of the customs border organizations should be clearly determined, and the customs structures should continue their business and transactions in an accountable manner.

Recommended practices 2: Compliance with national and international legislations aimed at making international trade procedures online

Today, although e-commerce has reached an important point in the global sense, there are procedures such as concrete document output, wet signatures, etc. in international trade. On the one hand, access to information accelerates, on the other hand, performing procedures online will facilitate and improve international trade. The Model Law on Electronic Transferable Records

(MLETR) adopted in 2017, enables the use in electronic form of bills of lading, promissory notes, warehouse receipts. etc. MLETR was developed by Working Group of the United Nations Commission on International Trade Law, through an inclusive and deliberative process between 2011 and 2016. The Kingdom of Bahrain was the first to adopt legislation based on or influenced by the MLETR in 2018. OIC Countries should implemented MLETR in their legislation.

Recommended practices 3: Bilateral, regional and international agreements should be increased.

Particularly in terms of international electronic trade, membership in organizations such as the World Trade Organization and regional agreements between countries are very important. These agreements will provide a psychological contribution to the development of international e-commerce, as well as creating an environment of trust. Especially with the increase and enrichment of the agreements between the COMCEC members, mutual trade will increase and the COMCEC structure will become stronger.

Standards 2: A strong, competitive and sustainable logistics infrastructure should be provided.

Recommended practices 1: Logistics infrastructure should be developed for cheap, fast and safe delivery of goods.

One of the most important elements in e-commerce is to provide fast, cheap and safe logistics. Otherwise, not only the e-commerce sector, but also the traditional sales companies are adversely affected by the deficiencies in the logistics infrastructure. The development of logistics infrastructure and involvement in international networks is very important for country enterprises to compete with global players. On the one hand, while developing land, sea and airline infrastructure, on the other hand, logistics bases should be established. Especially in places under the threat of war and terrorism, reinforcements should be made in terms of security, and necessary guarantees should be given by the relevant units of the countries. Another important issue, especially for small businesses, is the development of parcel transportation. The development of the parcel transportation sector provides the delivery of small orders at affordable prices.

The key policy area 6: Skills Development and Entrepreneurship

Standards 1: OIC Countries should be at a good level in terms of ICT skills

Recommended practices 1: ICT user skills should be increased.

As the people's ICT usage skills improve, it will be possible to develop e-commerce in the country. ICT usage skills will not only be limited to making purchases, but also to do the necessary research, stay away from fraudsters, and increase productivity through e-government transactions.

Some OIC countries have a low literacy rate. Providing literacy trainings online and adding digital literacy to the content of the training will contribute to the development of digital literacy in countries. Facilitating and educational software interfaces also enable the development of ICT skills.

These interfaces can be part of explanatory online pages or social projects that explain step-by-step how to use applications and programs. Providing result-oriented simple trainings for the use of mobile phones by the elderly (HKJK, 2021) and developing an interface for the use of mobile phones by the elderly (Ageuk, 2023) are a few examples aimed at adaptation to ICT.

Recommended practices 2: ICT practitioner skills should be developed.

The need for ICT professionals is increasing day by day. ICT practitioners are wanted to be employed in all areas of professional life in the private sector and in the public sector, and despite the high demand, the number of these people cannot be increased as much as demanded. As working conditions, the ease of not being in the same country, even in the office environment, provides the sector employees with the convenience of working all over the world without leaving the country they live in. All research shows that ICT professionals are among the most sought-after professions and the supply-demand gap will continue to increase. Country resources are very important in raising and retaining ICT experts, and it is very difficult for businesses to meet this task alone. Government support and incentives can be beneficial in employing qualified personnel to solve the problem of ICT practitioners, which is an important problem especially for underdeveloped and developing OIC countries. In developing ICT practitioner skills, encouraging and training activities should be started at an early age. Efforts should be made to train new graduates with overseas education and research scholarships.

Standard 2: E-Commerce companies should be ensured to be sustainable and competitive businesses and E-Commerce Entrepreneurship should be encouraged

Recommended practices 1: Branding and E-Business skills should be developed

Entrepreneurship activities carried out through social media and interfaces offer great opportunities, and social media entrepreneurship makes it possible to reach large segments in a short time with minimum risk and make sales possible. Entrepreneurship activities are facilitated by the provision of services such as payment, promotion, sales procedures, cargo and returns by sales interfaces, but with this model, there is a risk that interface brands will be strengthened and businesses that sell on e-commerce platforms may not be able to create/develop their brands.

Companies that sell on e-commerce platforms try to exist in commercial life in line with the policies of the interfaces. Consumers, on the other hand, remember the names of the platforms they buy instead of product brands, so they cannot develop long-term relationships with vendors. At this point, branding efforts are very important. E-commerce companies need to create value, make brand promises and fulfill their brand promises, and include marketing communication efforts that will remain in the minds of their target audiences. Although companies use interfaces, they must have skills such as finance, marketing, human resources and be equipped to carry out long-term customer relations. Companies that sell on e-commerce platforms should not be condemned to mere e-commerce intermediaries by improving their ability to sell on their own e-commerce sites.

Standards 3: Ensuring that e-commerce entrepreneurship can be an alternative for the underdeveloped segments of society

Recommended practices 1: Carrying out awareness and talent development projects in the underdeveloped segments of society on e-commerce entrepreneurship

One of the most important advantages of e-commerce is that it can carry out commercial activities with low capital and operating expenses, and this advantage is a great advantage especially for segments of society such as women, the disabled, and newly graduated youth. Numerous projects are carried out by international institutions/organizations to involve women and youth in OIC countries in e-commerce and digital world. In countries where e-commerce platforms are strong, the advantages of e-commerce should be explained, digital sales, digital marketing, social media marketing trainings and different projects should be carried out.

Recommended practices 2: Encouraging the underdeveloped segments of the society to become e-commerce entrepreneurs with support and incentive programs

In this context, support and incentive programs may be encouraging. For example, if the SMEs benefiting from government support in Türkiye are women, the amount of support can be 10% higher. On the other hand, some conveniences can be provided for these groups in public procurements made through electronic means (the condition of being a 3-year business instead of 5 years, making positive discrimination in evaluation by giving extra points, etc.).

Recommended practices 3: It is important in terms of social entrepreneurship that e-commerce platforms support certain segments by making positive discrimination.

E-Commerce platforms can support the underdeveloped segments with different tools. For example, an e-commerce platform in Türkiye prints the logos of women entrepreneurs and entrepreneurs in the earthquake zone on online product advertisements, making these businesses stand out

Table 4-1 List of Standards and Recommendations

Key Policy Areas	Standards	Recommendations
The key policy area 1: Common language and cooperation framework within the OIC countries	*Standard 1: OIC countries should be able to create, analyze and report a common data pool on e-commerce.*	Recommended practices 1: *A common definition and classification of e-commerce should be determined in the OIC Countries*
		Recommended practices 2: Creating a valid and up-to-date database for effective management
		Recommended practices 3: Establishment of COMCEC E-commerce info-portal
	Standard 2: E-commerce activities should be developed among OIC countries	*Recommended practices 1: Know-how transfer of developed COMCEC countries to other COMCEC countries in E-commerce*
		Recommended practices 2: Developing e-commerce project capacity in COMCEC member countries
		Recommended practices 3: Encouraging the establishment of an E-Commerce-oriented Non-Governmental Organization
		Recommended practices 4: The topic of development of E-commerce in OIC countries should be considered as a permanent agenda item at COMCEC Trade Working Group meetings.
The key policy area 2: Politic and Regulatory Framework	*Standard 1: OIC countries should effectively manage their E-commerce*	*Recommended practices 1: It is important to determine the multi-year e-commerce strategy that will shed light on the e-commerce vision of the country and to share it with the public.*

	strategy, policy and programs.	*Recommended practices 2: Implementation-oriented e-commerce programs should be established, coordination should be ensured and developments should be followed.*
		Recommended practices 3: Policies for the provision of more public services through e-government should be followed.
		Recommended practices 4: Online payment facilities need to be developed.
		Recommended practices 5: E-commerce businesses should be able to benefit from government support and incentives.
		Recommended practices 6: Countries should monitor e-commerce platforms, license those that meet certain conditions, and accredit and certify companies engaged in e-commerce on these platforms.
		Recommended practices 7: Especially in countries that do not have developed e-commerce platforms, governments should implement/support the implementation of their own trading platforms.
		Recommended practices 8: Developing not only B2C but also B2B should be among the priority strategies.
		Recommended practices 9: Providing physical and online facilities where companies can get information about e-commerce
The key policy area 3: Legal Framework	*Standard 1: Legal frameworks should be regulated up-to-date*	*Recommended practices 1: Making a general legal regulation on e-commerce environment*
		Recommended practices 2: Harmonization and development of laws and regulations in countries to develop e-commerce
		Recommended practices 3: Making legal regulations on electronic commerce service providers
		Recommended practices 4: Remote electronic transactions should be regulated up-to-date
		Recommended practices 5: Trust building/developing regulations should be made up-to-date.
		Recommended practices 6: Monitoring and registration e-commerce activities

		Recommended practices 7: E-Commerce activities exceeding certain limits can be carried out by registered businesses.
The key policy area 4: ICT Framework	*Standards 1: ICT Infrastructure and Services should be strengthened*	*Recommended practices 1: Access to electricity, internet and mobile access at the desired quality and affordable price*
		Recommended practices 2: Modern ICT infrastructure and services should be able to safely support payment, purchasing, tracking modules in a way to develop E-Commerce securely.
		Recommended practices 3: The ICT sector in countries should be strengthened.
The key policy area 5: Trade Facilitation and Logistic framework	*Standards 1: Trade facilitation performance should be improved*	Recommended practices 1: Formalities should be reduced, Appeal Procedures, Governance and Impartiality should be improved.
		Recommended practices 2: Compliance with national and international legislations aimed at making international trade procedures online
		Recommended practices 3: Bilateral, regional and international agreements should be increased
	Standards 2: A strong, competitive and sustainable logistics infrastructure should be provided.	*Recommended practices 1: Logistics infrastructure should be developed for cheap, fast and safe delivery of goods.*
The key policy area 6: Skills Development and Entrepreneurship	*Standards 1: OIC Countries should be at a good level in terms of ICT skills*	*Recommended practices 1: ICT user skills should be increased.*
		Recommended practices 2: ICT practitioner skills should be developed.
	Standard 2: E-Commerce companies should be ensured to be sustainable and competitive businesses and E-Commerce Entrepreneurship should be encouraged	*Recommended practices 1: Branding and* E-Business skills should be developed

	Standards 3: Ensuring that e-commerce entrepreneurship can be an alternative for the underdeveloped segments of society	*Recommended practices 1: Carrying out awareness and talent development projects in the underdeveloped segments of society on e-commerce entrepreneurship*
		Recommended practices 2: Encouraging the underdeveloped segments of the society to become e-commerce entrepreneurs with support and incentive programs
		Recommended practices 3: It is important in terms of social entrepreneurship that e-commerce platforms support certain segments by making positive discrimination.

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ANNEX I - Survey on E-commerce and Non-E-commerce Businesses

1)Country name:
2)Business Sector:
3)Overseas target countries (Exports, Invests):

4) Your E-commerce type

Business to Business	Business to Customers	Business to Goverments

5)Choose Your E-Commerce Activities

Production	Distribution	Marketing	Sales	Delivery

	1 I totally disagree	2 I partially disagree	3 I neither agree nor disagree	4 I partially agree	5 I totally agree
Inexpensively making the company widely known					
Cost savings through e-Commerce operations					
Cost savings through decreases in personnel					
Improving customer service via e-Commerce					
Expanding sales to a wider geographic area					

Top management's enthusiasm for using high technology					
Maintaining company prestige					
Keeping up with technology trends in Business					

6) Please indicate what are the factors that motivate you for e-commerce? (1 I totally disagree- 5 I totally agree)

7) Rate the e-commerce factors in your country (1 Very poor-5 Very good)

	1 Very poor	2 Poor	3 Neither good nor poor	4 Good	5 Very good
Country E-commerce Strategy					
ICT Infrastructure					
Payment Solutions					
Trade logistic and Facilitation					
Legal Frameworks					
Skills developments					
Financing SME's					

8) Please indicate whether you agree with the following items from the options (1 totally disagree 5 totally agree)

	1 I totally disagree	2 I partially disagree	3 I neither agree nor disagree	4 I partially agree	5 I totally agree
There is no problem with digital connection in my country (broadband Internet access, cell phones)					
There is no problem with digital connection in my first target export country (broadband Internet access, Cell phones)					
My country follows transparent and pro-competitive policies					
There are laws and regulations in my country that facilitate the entry and exit of companies. (Establishment and bankruptcy)					
My country has an open trade regime that exposes companies to foreign competition and investment					
People in the country have the skills to use e-commerce.					
E-commerce businesses can access data on domestic and international trade. (Foreign Market information, export procedures etc.)					
There are restrictions on electronic payment instruments in my country.					
There are regulatory barriers to the flow of information in my country.					
There are reliable shipping and logistics services in my country.					
In my country, trainings are given to consumers for the development of e-commerce.					
In my country, trainings are given to businesses for the development of e-commerce.					
E-business skills are sufficient in our business. (Business skills, Technology skills)					
Digital specialist skills are sufficient in our business					
Digital user skills are sufficient in our business.					

In my country, laws and regulations regarding electronic documents and e-signatures are sufficient.	
In my country, regulations are sufficient for electronic payments.	
My country has legislation on consumer protection measures such as spam restriction, right of withdrawal	
Cyber security measures are being taken in my country.	
In my country, there are rules on intermediary responsibility that deal with the legal responsibility of digital platforms.	
There are reasonable safeguards for the use of personal information, such as privacy and data protection regulations.	

9) Could you write your suggestions for the development of e-commerce in your country?

10) Could you write your suggestions for the development of e-commerce within the OIC countries?

ANNEX II – Survey to Organizations/Institutions

1) Country name:
2) Name of Organization/Institution:
3) How your organization related with e-commerce: Legislation, Support, Training, Informing
4) Org./Inst. type: Ministry Agency, NGO

	1 Very poor	2 Poor	3 Neither good nor bad	4 Good	5 Very good
Country E-commerce Strategy					
ICT Infrastructure					
Payment Solutions					
Trade logistic and Facilitation					
Legal Frameworks					
Skills developments					
Financing SME’s					

5) Rate the e-commerce factors for your country (1 Very poor-5 Very good)
6) Please indicate whether you agree with the following items from the options (1 totally disagree 5 totally agree)

	1 I totally disagree	2 I partially disagree	3 I neither agree nor disagree	4 I partially agree	5 I totally agree

There is no problem with digital connection in my country (broadband Internet access, cell phones)	
My country follows transparent and pro-competitive policies	
There are laws and regulations in my country that facilitate the entry and exit of companies. (Establishment and bankruptcy)	
My country has an open trade regime that exposes companies to foreign competition and investment	
People in the country have the skills to use e-commerce.	
E-commerce businesses can access data on domestic and international trade. (Foreign Market information, export procedures etc.)	
There are restrictions on electronic payment instruments in my country.	
There are regulatory barriers to the flow of information in my country.	
There are reliable shipping and logistics services in my country.	
In my country, trainings are given to consumers for the development of e-commerce.	
In my country, trainings are given to businesses for the development of e-commerce.	
E-business skills are sufficient in our business. (Business skills, Technology skills)	
Digital specialist skills are sufficient in our business	
Digital user skills are sufficient in our business.	
In my country, laws and regulations regarding electronic documents and e-signatures are sufficient.	
In my country, regulations are sufficient for electronic payments.	
My country has legislation on consumer protection measures such as spam restriction, right of withdrawal	
Cyber security measures are being taken in my country.	
In my country, there are rules on intermediary responsibility that deal with the legal responsibility of digital platforms.	
There are reasonable safeguards for the use of personal information, such as privacy and data protection regulations.	

7) Could you write your suggestions for the development of e-commerce in your country?
8) Could you write your suggestions for the development of e-commerce within the OIC countries

ANNEX III – Information

UNCTAD B2C E-commerce index, (2020)

2020 Rank	Economy	Share of individuals using the Internet (2019 or latest)	Share of individua lswith an account (15+, 2017)	Secure Internet servers (norm. 2019)	UPU postal reliabili tyscore 2019 or latest	2020 Index value)	Index value change (2019-20data)	Rank 2019
1	Switzerland	97	98	92	97	95.9	-0.1	2
2	Netherlands	96	100	94	93	95.8	-0.7	1
3	Denmark	97	100	100	81	94.5	0.2	6
4	Singapore	89	98	94	97	94.4	-0.4	3
5	United Kingdom	96	96	84	98	93.6	-0.8	4
6	Germany	93	99	90	91	93.4	0.6	9
7	Finland	95	100	88	91	93.4	-0.9	5
8	Ireland	88	95	92	98	93.4	-0.6	7
9	Norway	98	100	84	88	92.6	-0.7	8
10	China, Hong Kong SAR	92	95	88	92	91.8	1.0	14
11	New Zealand	95	99	80	93	91.8	-1.0	10
12	United States of America	87	93	94	90	91.0	-0.7	13

13	Canada	91	100	84	88	90.8	-0.9	11
14	Estonia	90	98	91	84	90.8	0.2	15
15	Sweden	98	100	82	84	90.8	1.2	17
16	Australia	87	100	84	92	90.6	-1.1	12
17	France	89	94	83	94	90.0	-0.3	16
18	Korea, Republic of	96	95	68	100	89.8	0.4	19
19	Austria	88	98	82	87	88.8	-0.7	18
20	Japan	85	98	79	93	88.7	2.4	21
21	Belgium	90	99	79	79	86.8	-1.1	20
22	Czechia	87	81	88	88	85.8	0.4	24
23	Slovakia	83	84	80	96	85.7	0.5	25
24	Spain	91	94	79	76	84.9	2.6	34
25	Croatia	79	86	81	90	84.0	-0.3	27
26	Israel	87	93	75	81	83.9	-2.2	22
27	Lithuania	82	83	83	83	82.6	-0.9	30
28	Poland	80	87	80	82	82.2	-0.7	32
29	Italy	76	94	77	80	81.8	0.2	36
30	Malaysia	84	85	71	85	81.3	-2.1	31
31	Hungary	80	75	82	85	80.5	1.6	38
32	Iceland	99	99	89	34	80.3	-4.5	26
33	Greece	76	85	71	84	79.2	1.7	41
34	Slovenia	83	98	85	49	78.8	-3.9	33
35	Belarus	83	81	70	81	78.8	-0.5	37
36	Luxembourg	96	99	85	34	78.4	-5.4	29
37	United Arab Emirates	99	88	61	64	78.2	-5.6	28
38	Cyprus	86	89	73	65	78.1	-7.4	23
39	Latvia	86	93	80	52	77.8	-3.9	35
40	Portugal	75	92	79	63	77.5	0.5	42
41	Russian Federation	83	76	74	74	76.6	-1.3	40
42	Thailand	67	82	59	97	76.0	2.0	48
43	Serbia	77	71	73	80	75.3	-0.9	44
44	Iran (Islamic Republic of)	70	94	57	79	75.0	-0.4	45
45	Romania	74	58	79	89	75.0	0.5	46

2020 Rank	Economy	Share of individuals using the Internet (2019 or latest)	Share of individuals with an account (15+, 2017)	Secure Internet servers (normalize d, 2019)	UPU postal reliability score (2019 or latest)	2020 Index value)	Index value change (2019-20 data)	Rank 2019
46	Bulgaria	68	72	85	70	73.9	-4.4	39
47	Georgia	71	61	64	98	73.6	0.8	51
48	Malta	86	97	75	33	72.9	-3.7	43
49	Saudi Arabia	96	72	43	78	72.3	-1.0	49
50	Qatar	100	66	50	73	72.1	-2.2	47
51	Ukraine	59	63	72	91	71.2	-1.2	52
52	North Macedonia	81	77	54	73	71.1	-1.9	50
53	Republic of Moldova	76	44	68	95	70.8	-1.5	53
54	Oman	92	74	43	73	70.6	2.4	60
55	China	61	80	54	85	70.1	0.0	55
56	Costa Rica	86	68	59	63	68.8	3.7	62
57	Türkiye	74	69	70	63	68.8	-3.0	54
58	Kuwait	100	80	50	45	68.7	-0.6	57
59	Chile	82	74	75	42	68.4	1.7	61

60	Kazakhstan	87	59	63	64	68.2	-1.5	56
61	Mongolia	76	93	60	31	65.0	-3.7	59
62	Brazil	74	70	64	46	63.5	6.1	72
63	Viet Nam	69	31	64	83	61.6	0.8	66
64	Lebanon	78	45	44	74	60.4	0.1	69
65	Azerbaijan	81	29	49	82	60.0	-1.8	63
66	Bahrain	100	83	49	7	59.7	-1.0	67
67	Dominican Republic	75	56	40	67	59.3	-1.1	68
68	Colombia	65	46	54	71	59.1	-1.9	65
69	Mauritius	64	90	51	28	58.4	-10.6	58
70	Bosnia and Herzegovina	70	59	64	40	58.1	-3.4	64
71	India	34	80	49	65	57.1	1.4	75
72	Uruguay	87	64	61	15	56.6	1.3	76
73	South Africa	56	69	77	24	56.5	0.1	73
74	Jamaica	55	78	41	45	55.0	-3.1	70
75	Trinidad and Tobago	77	81	47	14	54.9	-2.9	71
76	Jordan	67	42	39	71	54.7	2.0	80
77	Tunisia	67	37	46	69	54.6	-1.4	74
78	Montenegro	73	68	54	21	54.0	-0.1	77
79	Peru	57	43	49	61	52.5	4.8	91
80	Algeria	60	43	33	73	52.2	14.0	109
81	Ghana	39	58	32	79	51.9	12.7	101
82	Argentina	80	49	65	10	50.9	0.0	82
83	Indonesia	48	49	60	43	50.1	0.0	85
84	Armenia	65	48	51	36	49.9	-3.8	78
85	Libya	75	66	57	1	49.7	-1.0	83
86	Albania	70	40	54	34	49.5	-2.7	81
87	Panama	64	46	61	26	49.5	0.7	90
88	Kenya	23	82	46	46	49.0	0.0	89
89	Belize	47	48	85	14	48.6	1.3	92
90	Venezuela (Bolivarian Rep.of)	72	73	45	2	48.0	-5.5	79
91	Sri Lanka	34	74	48	36	47.8	-1.8	87
92	Paraguay	69	49	48	23	47.1	-3.4	84

2020 Rank	**Economy**	**Share of individuals using the Internet (2019 or latest)**	**Share of individuals with an account (15+, 2017)**	**Secure Internet servers (normalized, 2019)**	**UPU postal reliability score (2019 or latest)**	**2020 Indexvalue)**	**Index value change (2019-20data)**	**Rank 2019**
93	Mexico	70	37	46	34	46.8	-0.2	93
94	Nigeria	26	40	36	83	46.2	-3.0	88
95	Morocco	74	29	49	27	44.8	1.3	97
96	Philippines	65	35	39	40	44.7	-5.1	86
97	Kyrgyzstan	80	40	47	11	44.3	2.7	110
98	Honduras	39	45	38	54	44.2	0.7	96
99	Senegal	46	42	26	62	44.1	1.1	98
100	Namibia	51	81	42	3	43.9	-1.4	95
101	Lao People's Dem. Rep.	26	29	30	78	40.6	5.4	112
102	Ecuador	59	51	47	0	39.5	-0.1	100
103	Bolivia (Plurinational State of)	47	54	43	12	39.2	0.2	102
104	Botswana	47	51	44	12	38.7	-0.1	106
105	Gabon	62	59	28	4	38.0	-0.3	108
106	El Salvador	51	30	38	29	37.0	-1.9	105

107	Uzbekistan	30	37	50	30	37.0	-8.4	94
108	Guatemala	65	44	38	0	36.8	1.7	113
109	Egypt	57	33	31	26	36.6	-2.1	107
110	United Republic of Tanzania	25	47	31	43	36.6	-3.9	99
111	Cameroon	23	35	24	60	35.5	0.8	115
112	Uganda	24	59	27	30	34.9	-3.9	104
113	Nepal	34	45	43	14	34.3	-1.1	111
114	Bhutan	48	34	51	2	33.6	0.8	117
115	Bangladesh	13	50	39	32	33.3	-5.8	103
116	Pakistan	24	21	35	50	32.5	-2.3	114
117	Cambodia	40	22	42	21	31.1	0.3	121
118	Zimbabwe	31	55	36	0	30.5	-3.7	116
119	Cōte d'Ivoire	36	41	32	12	30.4	-0.9	119
120	Zambia	24	46	31	19	30.0	1.2	125
121	Tajikistan	36	47	36	1	30.0	4.3	130
122	Nicaragua	46	31	37	2	29.0	-0.7	124
123	Eswatini	47	29	38	0	28.4	-1.6	123
124	Rwanda	11	50	36	16	28.3	0.0	127
125	Djibouti	56	12	32	10	27.7	-0.9	126
126	Ethiopia	19	35	6	51	27.5	-3.6	120
127	Lesotho	29	46	35	0	27.4	-4.6	118
128	Angola	14	29	24	37	26.0	-4.4	122
129	Iraq	49	23	22	8	25.4	0.2	132
130	Myanmar	31	26	22	17	24.0	-2.9	128
131	Togo	12	45	26	9	23.2	-3.0	129
132	Sudan	31	15	14	26	21.7	-3.9	131
133	Syrian Arab Republic	34	23	27	0	21.1	-0.7	135
134	Benin	20	38	21	4	20.7	1.4	140
135	Haiti	32	33	16	0	20.2	-1.0	138
136	Mozambique	10	42	26	2	20.1	-1.6	136
137	Madagascar	10	18	19	30	19.2	-2.9	134
138	Yemen, Arab Republic	27	6	14	27	18.5	-0.6	141

2020 Rank	**Economy**	**Share of individualu Using the Internet (2019 or latest)**	**Share of individua lswith an account (15+, 2017)**	**Secure Internet servers (normalize d, 2019)**	**UPU postal reliability score (2019 or latest)**	**2020 Index value**	**Index value change (2019-20data)**	**Rank 2019**
139	Burkina Faso	16	43	12	2	18.4	-0.4	143
140	Guinea	18	23	15	16	18.1	2.3	146
141	Malawi	14	34	25	0	18.0	-1.7	139
142	Mali	13	35	21	0	17.5	-7.0	133
143	Afghanistan	18	15	29	7	17.1	-1.9	142
144	Liberia	8	36	15	9	16.9	0.2	144
145	Mauritania	21	21	18	0	15.0	-1.5	145
146	Sierra Leone	9	20	16	13	14.4	-6.9	137
147	Congo	9	26	17	0	12.9	-1.1	148
148	Dem. Rep. of the Congo	9	26	11	5	12.8	-1.3	147
149	Comoros	8	22	18	0	12.0	-1.0	149
150	Burundi	3	7	20	3	8.3	-0.7	150

151	Chad	7	22	0	0	7.1	-1.4	151
152	Niger	5	16	2	0	5.6	0.3	152

Source: UNCTAD, 2022

OIC Countries E-commerce Market Data

Country	Market size for ECommerce	Revenue by 2023	Revenue by 2027	Product Categories with rates 1st.	Product Categories with rates 2nd.	Product Categories with rates 3rd.
Algeria	85th. largest	US$1,186.3 million	US$1,847.9 million	Food & Personal Care with 27.4%	Electronics & Media with 26.0%	Furniture & Appliances with 20.9%
Bahrain	79th. largest	US$1,313.4 million	US$1,856.6 million	Fashion with 27.4%	Food & Personal Care with 27.1%	Electronics & Media with 21.8%
Egypt	41st. largest	US$7,541.6 million	US$13,109.6 million	Electronics & Media with 23.6%	Fashion with 21.8%	Food & Personal Care with 21.2%
Iraq	50th. largest	US$5,311.6 million	US$8,806.6 million	Electronics & Media with 29.8%	Fashion with 25.9%	Food & Personal Care with 23.0%
Jordan	57th. largest	US$2,759.4 million	US$4,494.5 million	Electronics & Media with 29.9%	Food & Personal Care with 25.7%	Fashion with 20.0%
Kuwait	71st largest	US$1,673.9 million	US$2,387.0 million	Food & Personal Care with 28.9%	Fashion with 28.0%	Electronics & Media with 19.6%
Lebanon	67th largest	US$1,926.0 million	US$2,824.1 million	Electronics & Media with 31.4%	Food & Personal Care with 24.5%	Fashion with 19.3%
Morocco	69th largest	US$1,886.3 million	US$3,137.6 million	Electronics & Media with 47.9%	Fashion with 20.0%	Toys, Hobby & DIY with 12.3%
Oman	63rd largest	US$2,289.4 million	US$3,327.9 million	Electronics & Media with 32.9%	Food & Personal Care with 25.0%	Fashion with 22.2%
Qatar	52nd largest	US$3,817.9 million	US$5,683.7 million	Food & Personal Care with 31.8%	Fashion with 26.7%	Electronics & Media with 17.7%
Saudi Arabia	27th largest	US$11,977.7 million	US$20,155.8 million	Fashion with 33.9%	Electronics & Media with 26.9%	Food & Personal Care with 23.0%
Sudan	83rd largest	US$1,254.1 million	US$3,028.0 million	Toys, Hobby & DIY with 50.2%	Food & Personal Care with 20.9%	Electronics & Media with 12.1%
Tunisia	One of the smaller	US$522.8 million	US$886.8 million	Food & Personal Care with 23.6%	Fashion with 23.6%	Electronics & Media with 21.8%

United Arab Emirates	28th largest	US$11,782.3 million	US$16,373.4 million	Fashion with 38.7%	Electronics & Media with 19.9%	Toys, Hobby & DIY with 15.4%
Albania	One of the smaller	US$465.5 million	US$722.8 million	Food & Personal Care with 23.6%	Electronics & Media with 23.1%	Fashion with 23.0%
Azerbaijan	64th largest	US$2,123.4 million	US$3,447.5 million	Fashion with 30.7%	Electronics & Media with 29.1%	Food & Personal Care with 20.6%
Bangladesh	37th largest	US$8,444.7 million	US$15,241.6 million	Food & Personal Care with 33.6%	Electronics & Media with 26.3%	Fashion with 23.4%
Brunei Darussalam	One of the smaller	US$161.2 million	US$218.0 million	Food & Personal Care with 34.8%	Electronics & Media with 25.1%	Fashion with 17.0%
Indonesia	10th largest	US$52,930.1 million	US$78,684.5 million	Food & Personal Care with 27.1%	Electronics & Media with 26.2%	Toys, Hobby & DIY with 20.7%
Iran	24th largest	US$15,017.6 million	US$30,345.7 million	Electronics & Media with 36.2%	Food & Personal Care with 23.5%	Fashion with 19.3%
Kazakhstan	55th largest	US$3,451.9 million	US$5,909.4 million	Electronics & Media with 27.5%	Fashion with 26.1%	Food & Personal Care with 23.0%
Kyrgyz Republic	One of the smaller	US$479.5 million	US$798.6 million	Food & Personal Care with 37.8%	Fashion with 27.0%	Furniture & Appliances with 15.4%
Malaysia	31st largest	US$10,187.7 million	US$16,982.1 million	Electronics & Media with 29.3%	Fashion with 27.9%	Furniture & Appliances with 16.5%
Pakistan	47th largest	US$6,362.1 million	US$8,100.5 million	Electronics & Media with 34.1%	Furniture & Appliances with 28.8%	Fashion with 20.4%
Tajikistan	One of the smaller	US$290.6 million	US$471.7 million	Food & Personal Care with 36.8%	Electronics & Media with 24.0%	Furniture & Appliances with 17.6%
Türkiye	18th largest	US$22,983.4 million	US$39,441.6 million	Electronics & Media with 42.4%	Fashion with 22.6%	Toys, Hobby & DIY with 16.6%
Turkmenistan	One of the smaller	US$340.2 million	US$542.6 million	Electronics & Media with 40.0%	Food & P. Care with 26.8%	Fashion with 19.8%
Uzbekistan	73rd largest	US$1,566.5 million	US$2,640.3 million	Food & Personal Care with 27.3%	Electronics & Media with 26.8%	Fashion with 23.8%
Guyana	One of the smaller	US$87.6 million	US$143.6 million	Food & Personal Care with 34.0%	Electronics & Media with 21.6%	Fashion with 21.0%
Suriname	One of the smaller	US$62.6 million	US$109.4 million	Electronics & Media with 34.3%	Food & Personal Care with 29.3%	Furniture & Appliances with 15.5%

Benin	One of the smaller	US$395.7 million	US$666.2 million	Food & Personal Care with 32.4%	Electronics & Media with 30.4%	Fashion with 20.9%
Burkina Faso	One of the smaller	US$241.9 million	US$381.4 million	Food & Personal Care with 34.0%	Electronics & Media with 28.3%	Fashion with 17.1%
Cameroon	One of the smaller	US$390.9 million	US$659.5 million	Food & Personal Care with 34.6%	Fashion with 23.3%	Electronics & Media with 22.6%
Chad	One of the smaller	US$247.5 million	US$506.6 million	Food & Personal Care with 35.5%	Electronics & Media with 28.7%	Furniture & Appliances with 14.6%
Gabon	One of the smaller	US$181.4 million	US$297.8 million	Food & Personal Care with 42.1%	Electronics & Media with 18.2%	Furniture & Appliances with 18.0%
Gambia	One of the smaller	US$51.2 million	US$84.0 million	Electronics & Media with 32.9%	Food & Personal Care with 29.9%	Fashion with 18.9%
Guinea	One of the smaller	US$389.4 million	US$725.1 million	Food & Personal Care with 35.3%	Electronics & Media with 31.2%	Furniture & Appliances with 15.2%
Mozambique	One of the smaller	US$472.9 million	US$813.3 million	Electronics & Media with 34.6%	Food & Personal Care with 29.4%	Furniture & Appliances with 16.8%
Niger	One of the smaller	US$115.3 million	US$189.3 million	Food & Personal Care with 36.3%	Electronics & Media with 28.6%	Fashion with 15.7%
Nigeria	39th largest	US$7,627.6 million	US$11,707.0 million	Electronics & Media with 39.3%	Fashion with 22.3%	Furniture & Appliances with 15.7%
Senegal	One of the smaller	US$213.6 million	US$328.6 million	Food & Personal Care with 44.3%	Electronics & Media with 21.1%	Fashion with 19.2%
Sierra Leone	One of the smaller	US$210.8 million	US$410.7 million	Electronics & Media with 30.6%	Food & Personal Care with 30.3%	Fashion with 17.4%
Togo	One of the smaller	US$160.1 million	US$297.7 million	Food & Personal Care with 32.4%	Electronics & Media with 31.9%	Furniture & Appliances with 15.1%
Uganda	One of the smaller	US$395.7 million	US$636.0 million	Food & Personal Care with 47.2%	Electronics & Media with 20.7%	Fashion with 15.4%
Comoros	-	-	-	-	-	-
Djibouti	-	-	-	-	-	-
Libya	-	-	-	-	-	-
Mauritania	-	-	-	-	-	-
Palestine	-	-	-	-	-	-
Somalia	-	-	-	-	-	-

Syria	-	-	-	-	-	-
Yemen	-	-	-	-	-	-
Afghanistan	-	-	-	-	-	-
Maldives	-	-	-	-	-	-
Cote d'Ivoire	-	-	-	-	-	-
Guinea- Bissau	-	-	-	-	-	-
Mali	-	-	-	-	-	-

Source: (ecommerceDB, 2023)