
**ELECTRONIC BUSINESS MANAGEMENT**

MASTER'S THESIS

# Analysis of E-Commerce Impact on Work-life Balance

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## 1. INTRODUCTION

In economic development, which is related to the institutional and organizational structure of a country, innovation systems are of great importance. Innovation activities in the country and in innovation systems, which are the superstructures that ensure the coordination and interaction of institutional structures, regulating innovation activity and competitive development programs undertake the executing and transport duties. In many studies in the literature, national innovation revealed that there is a linear relationship between the system and development. While national and regional innovation systems, which are closely related to the production of new knowledge, the combination of existing knowledge in different ways or the transformation of knowledge into economically profitable products and processes, make very important contributions to regional and national development by increasing their competitiveness, R&D institutions and institutes, technoparks, university-industry collaborations, innovation transfer centers, and development agencies also play very important roles in this process. The fact that a country has advanced innovation capabilities and technologies and creates an effective national innovation system enables the country to enter a sustainable economic development process and increases the country's basic competitiveness. (Isik & Kilinc, 2012) At this point, Investment in R&D activities, high human resources, ease of access to finance at the point of supporting entrepreneurship and adequacy of risk capital, protection of intellectual property rights, the intensity of technological activities, and industrial clusters are very important.

In the last decade, rapid developments in information and communication technologies such as the Internet and mobile computing have dramatically changed the landscape of both the established and emerging commercial world. Electronic commerce (E-commerce) as we know it today, such as Internet-enabled commerce (I-commerce) and mobile commerce (M-commerce), is based on Internet-related developments and previous technological innovations. telecom telecommunications national computing combination. In recent years, it has been accepted that there are transitions from I-commerce to M-commerce, commerce (U-commerce) in e-commerce. Companies that adopt these E-commerce technologies are called "other electronic businesses-businesses". (Romania, 2022) They conduct transactions, communicate, and innovate to support commerce through cyberspace. E-businesses have created unprecedented new channels to reach customers, introducing new products or services to integrate supply chain partners and expand business areas. However, these E-businesses are likely to be more sensitive to changes in information technology (IT) than traditional businesses. Rapid technological changes have evolved from the dependence of communication and commerce on the fixed Internet and wireless computing to ubiquitous wireless network computing. The rapidly increasing affordability of innovative technologies has spurred several E-commerce innovations and created new opportunities and challenges. Wireless

technology has changed the existing capabilities of established businesses. To embrace these opportunities, managers in e-business must continually restructure and renew corporate resources rather than maintaining their talents along with technological and business expertise to maintain their competitive advantage. the ever-changing E-commerce environment (YAN, RAN, et al, 2022). E-business managers need to recognize and evaluate changes in the business and technological environment and be concerned with the degree to which the company meets emerging talent gaps promptly. Having this knowledge is essential for managers to successfully adapt from one type of E-commerce innovation to another. Therefore, this study uses an E-commerce innovation model adopted from the Abernathy and Clark model with secondary data analysis and comparative analysis to analyze differences in technological and business model dimensions and explore key dynamic capabilities in both dimensions for e-commerce innovation. The internet (public network), which we met shortly before the twenty-first century, and which has affected every aspect of our lives with its speed of development, although it is still new, is a product of the technology revolution. Perhaps we can say that it is a revolution. Developments and innovations in the field of technology and the internet have created differences in trade as well as in many other areas and have led to changes. Because today the internet means many aspects, speed means convenience.

The introduction part is including ‘Statement of the Problem, Research Question, Research Aim, and Background of the study.’ In the second part of the thesis, which is the ‘Theoretical part’ we are going to mention about main concepts of the research, discuss relevant research based on the thesis topic which was done previously, support the research question and see with statements, the interpretation of the previous research will be conducted including accomplishing/ underlying of the thesis topic.

The third part will be ‘Methodology of the Study’ to explain methods of analysis, and data collection which I have done while I am writing the thesis and doing research about the research question of the thesis.

Furthermore, we will discuss deeply how e-commerce developed till this point, what are the side effects of this innovation period of E-commerce, and the advantages, disadvantages, and E-commerce impacts on Work-Life Balance. The development process of the Internet, new economic systems, and their histories have been examined in detail, and the positive and negative effects of these developments have been emphasized. After examining all the issues related to e-commerce in detail, open-ended questions, interview methods, and multiple-choice questions were asked to better understand the effects of e-commerce on business life.

This study intends to increase public awareness of e-commerce advances and expectations, together with an estimation of the potential impact on work-life balance by investigating of E-commerce impacts on Work-Life Balance using the 'Survey Method' and examining the impacts.

**Statement of the Problem**

The impact process of innovation over e-business and e-commerce systems is changing every year with new instruments regarding the situations worldwide. Organizations are essentially changing the way they do their work with the advent of e-business, and it became an inseparable part of organizations. As e-business evolution continues with emerging technologies and business models, a solid understanding of e-business innovation, process and strategy is proving invaluable to successful e-business development and management.

While technology gives new possibilities to grow in plenty of areas for companies, businesses, and other start-ups everybody chooses different paths to innovate their businesses. Last decades, e-business becoming more and more popular because everything can be done with a click, through the internet, and online stores. Especially, after COVID, everyone was aware of the importance of online shopping, also usage of the internet increased. Most owners who have physical stores, opened a website to sell their products to customers.

This process, along with new technologies, of course, continued to develop and change over time. With each new technological development, e-commerce and e-business systems have changed. Even though this change was positive in its general framework, companies that were operated by traditional methods, could not keep up with the change, could not catch up with the new technological change and development, and had a very difficult time in this process. In this paper, we are going to see the whole process of these innovations and developments starting from the internet and then the effects of e-commerce on Work-Life Balance. In addition, we will see in which areas these innovations contribute to our lives and the changes in business life. The following question will be the main question for the study which answer will be indicated in this research paper.

**The object of The Study**

The object of the study is the effects of changes in e-commerce on work-life balance.

**The subject of the Study**

The Subject of the study is analyzing of E-Commerce impacts on Work-life balance.

**Aim and objective of the Study**

This study aims to analyze of e-commerce impacts on Work-Life Balance from an employee, and customer perspective and how it can affect Work-Life.

The specific goals of this study are to:

This study aims to raise awareness about the developments in e-commerce and the expectations with an estimate of where the impact on work-life Balance can come in this process.

In this study, a general perspective on the systems, an Analysis of E-Commerce impacts innovation period of E-commerce also effects on Work-Life Balance have been drawn and the functioning of these systems has been tried to be revealed. While analyzing these methods, will use the *'Survey Method'* to understand the subject deeply and different kinds of study cases will examine. Also, contributing all findings and evaluating my knowledge will examine the 'E-commerce Impacts on Work-Life Balance.' By analyzing and comparing all the results of the evaluation, innovation process of E-commerce, Internet, economy, and technology, will understand the research topic and the main changes in this field. While answering the research question, *'The content analysis technique'* will be used.

**Research Questions:**

1. What are the E-Commerce impacts on Work-Life Balance?
2. What kind of E-Commerce developments affect Work-Life Balance?
3. How has E-Commerce affected the Work-life of employees?
4. What are the impacts of E-Commerce on Workplace Structure and Business Organization?

**Background of the study**

E-business opportunities were extremely increased last decades as we discussed in the introduction part of the thesis. Companies are changing their understanding of their business ideas, system, and upcoming models but there are still unexplored methods waiting to explore. Which is needed to analyze and understand the 'Development of E-Commerce' to improve the latest assessments. Studies in recent years indicate that is becoming a much more valuable topic for all firms. The e-commerce industry is constantly growing around the world. Every day, new e-commerce markets are emerging, and established markets are reaching new milestones.

A huge majority of society is using technology in various parts of their lives. This amounts to more than 1 billion online buyers and it is projected to grow in an upward direction. (Asharat & Anoop, 2016) Furthermore, Business model innovation (BMI) is already one of the most important topics, additionally, e-businesses contribute to this field with technology usage. This field delivers advantages for the customers and clients which are also getting harsh relatedly population and circulation in the economy. Other challenges to business innovation are competitiveness, industry, new markets, and sources companies should adopt and follow all these processes. According to Prahalad and Ramaswamy (2004), these challenges like new services, processes, products, and markets, added value to organizations that aim to increase competitiveness in the market.

In this paper, the main aim is to analyze e-commerce development which helps to understand the process of innovation, furthermore, examine the impacts on the Work-life Balance of this development. What kind of methods is helping to develop e-commerce in which areas, what kind of methods can use during this period, and what are the motivations? These methods will be analyzed with *'The content analysis technique'* according to the multiple case study. Also, using both qualitative and quantitative methods will help to understand and analyze these methods related to the multiple-choice questions.

## METHODOLOGY OF THE STUDY

To ascertain the effect of E-commerce on Work-Life Balance, data will be studied in this study based on the scientific research methodology employing descriptive quantitative/qualitative content and a survey approach.

Employees from various businesses and independent business owners in all of Europe between the ages of 20 and 60 will make up the demographic profile of user subjects. Because they represent a group of employees who can explain the effects of e-commerce in their day-to-day working lives, this choice of sampling source is anticipated to give validity and reliability to the survey replies.

About 100 respondents will get structured questionnaires with predetermined response options from multiple-choice questions, and 5 employees will be interviewed. To get to a conclusion for the thesis work, statistical tests will be performed to compute and assess the frequency count and mean scores of the respondents to the questionnaire items.

## STRUCTURE OF THE STUDY

The thesis consists of parts such as the Introduction part, which is the first part of the study, the emergence process of electronic commerce, definitions, and general infrastructure are emphasized to create a certain background, and the information society and the new economy process are examined. In the following parts, the contributions of electronic commerce to the world economy are discussed in macro and micro terms. The phenomenon of globalization, which has been on the agenda of academic and business circles in recent years, and the consequences of electronic commerce interaction are further detailed with the international trade, digital division, changing global understanding in the supply and demand chain, and trade from local to global. In addition, this section also examines the sectoral impact of electronic commerce. Particular attention is drawn to certain sectors where information is used intensively, digital products are produced, and services are at the forefront. In the last part of this section, the evaluation of electronic commerce at the scale of the firm is made. It is emphasized that although small and medium-sized companies are insufficient in the face of technological developments, they can progress rapidly thanks to their flexible structures. Furthermore, e-commerce practices are discussed in terms of both regional associations and some countries in the world.

## SCOPE OF THE STUDY

Electronic commerce applications are examined in terms of workplace structure, business organization, and the virtual companies it has created. In addition, the competitive advantages it provides to companies and some advantages it provides to consumers are discussed under the advantages provided by electronic commerce. In particular, the changes in understanding brought about in business organizations are examined by changing logistics understanding, customer-oriented management approach, and changing marketing understanding.

Electronic commerce also has important effects on working-life balance and industrial relations. For this purpose, the aspects and effects of wages, qualifications, and working styles (remotely working, self-employed workers, online systems) on employees are explained by making use of the available data. The effect on employment, which is one of the most important dimensions of the subject, is examined in terms of the structure of employment, occupational and sectoral changes in employment, and geographical distribution.

**Strategy and methods of the research:**

Data will be created using both qualitative and quantitative research methods as discussed. Data will be collected from these two methods such as *survey* and *numerical variables.* The structure of the survey will be *multiple choice questionnaire* plot lines will be evaluated regarding both methods also using *'The content analysis technique.'*

The study will engage both qualitative and quantitative methods of research regarding relatable results. The quantitative research approach will be using measurement amounts, data, and numerical variables. Qualitative research will be expressed this research in words. Especially for understanding the concept/ logic of the study using a multiple-choice questionnaire to relate to e-commerce impacts on Work-Life balance.

**Research instruments:**

Research instruments will be questionnaires, surveys, tables, graphs, and observations. Questions will be multiple-choice questions also interviews which were done in the workplace. Answers will compare with the analysis of case studies which will help to understand deeply different views.

## DEFINITION OF KEY CONCEPTS

### Definition of E-Commerce:

E-commerce is an acronym for electronic commerce. The process of buying, selling, transacting, ordering, and paying for goods and services over the Internet is known as e-commerce. In such online business transactions, the seller can communicate with the buyer without face-to-face interaction. Some examples of real-world e-commerce applications are online banking, online shopping, online ticket booking, social networking, etc. Marketing, advertising, sales, and execution operations are done with the help of the internet. Monetary transactions made with the help of electronic media are e-commerce.

# 1. LITERATURE REVIEW OF IMPACTS OF E-COMMERCE ON WORK-LIFE BALANCE

This chapter will cover a variety of literature on the subject. This chapter's objectives are to introduce the topic of interest, list relevant research, and emphasize the value of that research to society. Reviewing e-history, commerce's discussing some of the elements influencing its development, discussing its advantages, and providing more specific details about e-commerce will all be covered.

The history of E-commerce and the internet will be also reviewed and discussed with all aspects, advantages, and disadvantages also will be reviewed in this chapter.

## 1.1. E-COMMERCE

### 1.1.1. Types of E-Commerce

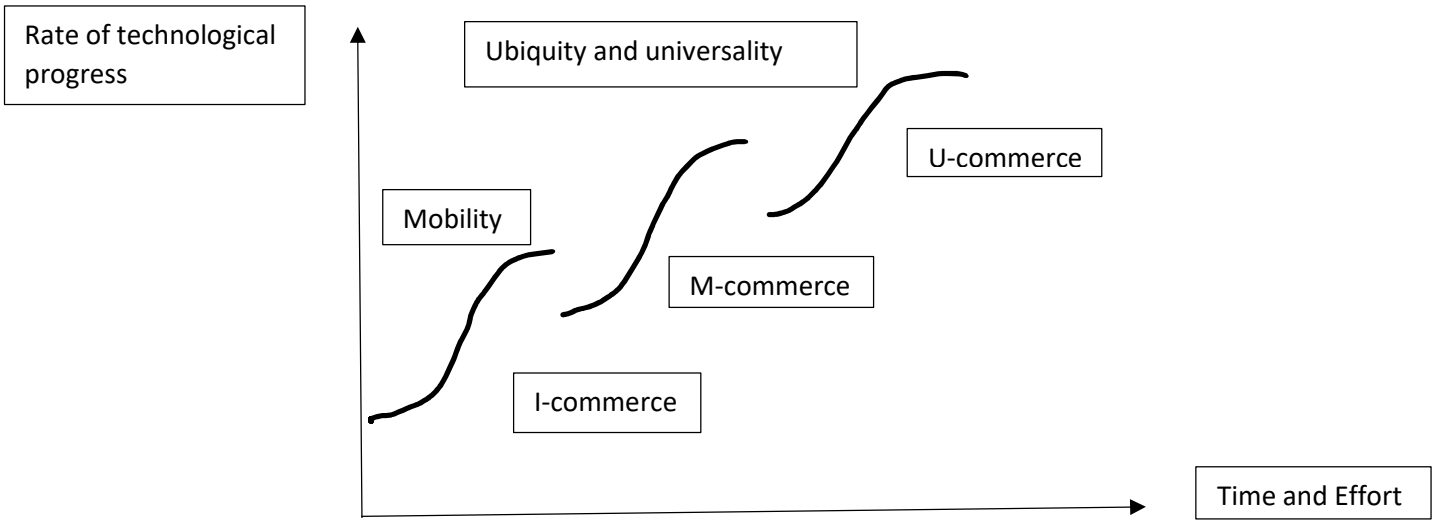
B2B – The buying and selling of goods and services between businesses are known as Business to Business. Examples: Oracle, Alibaba, Qualcomm, etc.

B2C – The transaction in which goods are sold by the business to the customer. Examples: Intel, Dell, etc.

C2C – Customer-to-customer business transaction. Example: Amazon, Wish

C2B – A business transaction between a customer and a business.

In previous paragraphs changes in e-commerce innovations are described generally, in recent years, these changes are started to take an important place in businesses which helps to grow and develop faster. This shift was recognizable, most local banks bankrupt with this huge shift, the internet, and mobile banking system got more popular and easier to use for customers, especially during the covid which showed us the importance of technology. Traditional -face-to-face- systems changed virtually. Furthermore, we can talk about three different systems which are based on E-business (commerce) but for various fields. I – commerce (Internet commerce), M-commerce (Mobile commerce), and U – commerce (Ubiquitous commerce). I – commerce is enabled to sell – buying products through internet marketplaces without physical markets. (Dave Chatterjee, 2022: 32) M-commerce is a wireless system, again selling or buying products on handheld devices and it provides people to shop online without a desktop computer and U – commerce is applied in both E-commerce and M-commerce the system supports high-quality setup for computing systems and services, and this system provides a universal connection which users can reach from anywhere/ anytime with any device and we can illustrate these changes using S curve (Graph 1).




Graph 1. Journal of Organizational Computing and Electronic Commerce 18(2):95-111

### 1.1.2. History of E-commerce

**1960's: CompuServe Founded/EDI was Discovered**

The history of eCommerce in the USA and the rest of the world began in Columbus, Ohio with the establishment of CompuServe, the first eCommerce business, amid the historic events of 1969. Due to a lack of internet, the company offers businesses computer-sharing services by transmitting data through phone lines (known as Electronic Data Interchange, or EDI).

A procedure that enables one firm to send information to another company electronically rather than on paper is known as EDI, which is the electronic interchange of commercial information using a defined format (Tian, Y., & Stewart, C., 2006) .

**1972: Computers Facilitate the First Online Sale**

Marijuana was the first product to be sold online, however, this is only partially accurate. Students from MIT and Stanford do use an Arpanet account to sell marijuana, but actual cash and goods exchange hands. Therefore, even though a computer makes the transaction possible, it is not actually "sold over the internet." (Tian, Y., & Stewart, C., 2006)

**1976: Online Transaction Processing Introduced**

Atalla Technovation and Bunker Ramo Corporation launch technologies for financial institutions that are intended to execute secure online transactions as the country marks its bicentennial.

**1979: Electronic Shopping Invented**

Ten years after the launch of CompuServe, British inventor Michael Aldrich shows how electronic shopping could function by using a telephone connection to connect a customized television to a computer that processes transactions (Tian, Y., & Stewart, C., 2006).

**1983: Electronic Commerce Acknowledged**

"Electronic commerce" is the topic of the first hearing before the California State Assembly. CPUC, MCI Mail, Prodigy, CompuServe, Volcano Telephone, and Pacific Telesis all gave testimony. The Electronic Commerce Act of California, which was passed a year later, imposed guidelines on programs created "To conduct the acquisition of goods and services via a telecommunications network." (Tian, Y., & Stewart, C., 2006) The internet was created on January 1, 1983, which was also this year. Multiple computer networks could not be connected previously using a standard method002E.

**1984: CompuServe Opens the Electronic Mall**

In one of the earliest instances of online retail, CompuServe launched the Electronic Mall in 1984, enabling customers to buy goods from about 100 different vendors.

**1989: World Wide Web Launches**

The World Wide Web was founded in 1989 by British scientist Tim Berners-Lee while he was employed at CERN (WWW) (Tian, Y., & Stewart, C., 2006) . The first web browser is released, which will catalyze online shopping because users of the internet can locate what they're looking for quickly and retailers can reach a larger audience.

**1994: Making the First Secure Online Transaction**

Netscape 1.0 was introduced ten years after the Electronic Mall first opened. Online transactions are kept secure by encryption on both the sending and receiving ends thanks to the Secure Socket Layer (SSL) protocol. (Tian, Y., & Stewart, C., 2006) Soon after, several independent credit card processing businesses started operating as the internet evolved into a genuine commercial platform.

When Phil Branden Berger purchases the Sting CD "Ten Summoners" on August 11, 1994, it is the first-ever encrypted secure internet transaction. Tales are accessible through NetMarket, according to the New York Times article "Attention Shoppers: Internet is Open."

**1995: Amazon, eBay, and the Boom of Online**

Online markets start to emerge. This includes Pierre Omidyar's Auction Web (1994), the first online auction site that would later be known as eBay, and Jeff Bezos' Amazon (1994), which was first intended to sell books (1995). (Tian, Y., & Stewart, C., 2006)

**1996: Electronic Business (e-business) Was Coined**

In 1996, the IBM marketing and Internet team coined the term "e-business."

**1998: PayPal Launches**

Confinity, the original name of PayPal, makes its debut as a mechanism for money transfers. It would merge with Elon Musk's online banking business in 2000, signaling its ascent to fame.

**1999: Global eCommerce reaches $150 Billion**

Entrepreneurs are lured by the internet's get-rich-quick promise, and start-ups are abundant. The good days won't last forever, of course.

**2000: The Dotcom Burst and Online Advertising**

The NASDAQ plunged 75% between March 2000 and October 2002 when the bubble burst, wiping out the majority of the profits achieved since the advent of the internet. Many companies in the online and technology sectors file for bankruptcy, including Webvan, a pioneer in food delivery. Google AdWords is made available notwithstanding the boom as a tool for eCommerce businesses to advertise using short-text ad copy and display URLs. (Tian, Y., & Stewart, C., 2006) Online retailers' pay-per-click (PPC) advertising campaigns are booming.

**2005: eCommerce Made a Comeback**

Cyber Monday, which is held the Monday following Black Friday, is introduced to encourage online holiday shopping as e-commerce recovers greatly from the burst. Additionally, Amazon introduces Amazon Prime, which offers members free 2-day shipping within the US and raises consumer expectations for quicker service. In the United States, there are currently about 142 million Prime members.

**2006: Online Shopping Platforms Increase**

Tobias Lütke, Daniel Weinand, and Scott Lake started the company that is now known as Shopify to make it simple for business owners to launch online stores. Numerous other eCommerce platforms immediately entered the market and established themselves, including Magento and BigCommerce.

**2012: Food Shopping Goes Virtual**

Food shopping ultimately finds its footing in 2012 with the launch of Instacart, despite the failure or struggle of the mentioned Webvan and other grocery delivery services in the past. Customers who order goods online with Instacart are sent shoppers to nearby supermarkets to pick them up. Online food buying is a big business nowadays thanks to improvements in cold storage and delivery (Tian, Y., & Stewart, C., 2006) .

Additionally in 2012, Rick Nelson establishes The Fulfillment Lab, a provider of fulfillment services that offer eCommerce business owners innovative packaging, customization, and sales-boosting strategies.

**2017: E-commerce Remains Unstoppable**

The amount of money generated by worldwide e-commerce transactions, which include $25.516 trillion in B2B transactions and $3.851 trillion in B2C purchases, is rising as physical store sales decreased.

**2020: The COVID-19 Boost**

Numerous physical stores are forced to close their doors because of the coronavirus outbreak, while lockdowns keep many residents quarantined at home. People use online shopping to buy necessities and get rid of boredom. Data from IBM's U.S. Retail Index shows that the pandemic sped up the transition from traditional retail to online shopping by about five years. (Tian, Y., & Stewart, C., 2006)

The history of online business and commerce also demonstrates that this trend will continue unabated. Today, it has experienced significant growth.

### 1.1.3. Early Times of E-Commerce

In 1934, Schumpeter started innovation studies and it was the first study in history such as new ways of organization, sources of materials also the market with changes in the economic process of the market and industry changed. Schumpeter created a new structure for the economy and called it *'creative destruction* which was the primary fact for capitalism. In 1961, Schumpeter described innovation as a huge disruption that causes wealth and differentiation. In the following years, the economy strongly changed, and companies should prepare for competitiveness in the marketplace by following new technologies, products, services,

and processes. Innovation adds the value of companies/ organizations in the market with the development as Tidd et al. (2008) mentioned.

Business model innovations are practiced by investigating companies / innovating in the value proposition. This practice is considered by Osterwalder and Pigneur (2010), Lindgardt et al. (2009), and Johnson et al. (2008) as one of the major dimensions of BMI. The second one was considered by four of the five respondents and Osterwalder and Pigneur (2010), found the issue a key partnership and defined it using partners that influence positively the activities of businesses. Most used practices defined by three interviewees regarding processes and key – resources of the companies are considered as two of the four success factors for BMI by Johnson et al. (2008).

Innovation of business models requires systematic plans like business model canvas/ navigator, customer experience design, scenario technology, or using an existing business model with using creativity also there are different strategies that might help to grow businesses. But the main thing is understanding the customers who are the main targets for the owners, who demand the buy products. Such as market identification, business cycle, Product Niche, and Evaluate Competition. These methods help to innovate businesses by creating different business models and innovations.

In 1994 Amazon took the first step for E-business then in 1995 Yahoo, E – bay, and Altavista followed, and in 1996 Hotmail was published which is one of the most popular web-based emails it continued with GoTo.com (goto.com, 1998), Overture (2001), Google (google.com, 1998), Blogger (blogger.com, 1999) and Alibaba (Alibaba.com) which is B2B (Business to Business) marketplace with IPO 1.7 Billion dollar. While technology improves faster, systems were changed, and business became an Electronic Business. Innovation is discovering new ideas, solutions, and methods, when we look at that from a business perspective it means that new services, technologies, products, and business knowledge which is needed and what customers want from the companies and markets. There is an innovation model which is called ‘The Abernathy and Clark’ innovation model, which Classifies innovations according to their effect on the innovating firm's existing technological and market/business knowledge. (R. Clarke, 2015)

The World Wide Web (WWW), sometimes known as the "web," gave traditional corporate organizations that had previously relied on catalog sales a new sales channel. Other companies discovered that the internet was a wonderful location to post customer service materials like manuals and drivers as well as a place to assist in developing a uniform corporate image. Many Internet-based businesses emerged as the web matured, including online marketplaces like eBay and Amazon as well as online informational databases like eHow. Soon after graphical-based web design became accessible in the early 1990s,

businesses started using websites for marketing. The majority of these websites offered visitors basic details about a company's goods and services, as well as contact details like phone numbers and email addresses to help customers get in touch with a business for services. Nearly as soon as marketing departments understood that company websites were accessible to millions of individuals, the shift from giving basic business information to soliciting business via the web happened. With the capacity to encrypt credit card information, online purchases started in 1994. Websites gained the capacity to encrypt sessions with the introduction of the Secured Socket Layer (SSL), created by Netscape in 1994, making credit card transactions over the Internet more secure. Credit numbers may be disguised so that they could not be read by a third party with an encrypted connection between a company's server and a client computer, which would reduce the likelihood of card information being stolen. The number of companies selling goods online expanded because of this security. Large Internet-only companies like eBay and Amazon were founded because of advancements in server technology, which included the capacity to create webpages from product databases. In the past, each product had to be manually added to a web page for sale. Companies might employ web page templates on database-driven sites to instantly show tens of thousands of products. On these websites, traffic and revenues increased along with the number of products that were offered. Although early SSL implementations were good, many users did not believe that they were secure enough to protect credit card payment information. Additionally, using conventional credit card systems to handle micropayments, or payments under a dollar, proved too expensive. As a result, other micropayment websites appeared and disappeared. Due to its capability to transfer funds from numerous funding sources, such as bank accounts and credit cards, without disclosing the payer's credit card information to the merchant, one has persisted and performed exceptionally well. The business is PayPal. Many small businesses that would not otherwise be qualified for a regular credit card merchant account are now able to accept credit cards thanks to PayPal. The development of e-business (or electronic business) may be traced back to the early 1900s when text-based websites provided product information. Internet use for business purposes became possible for the first time. Websites were permitted to conduct business via the internet. When the first e-commerce business, CompuServe, USA, was founded in 1969, the development of e-commerce (or electronic commerce) can be traced back to that year. E-business is the superset of e-commerce, which is a subset of it. E-business and e-commerce are frequently used synonymously. Since that time, e-commerce has developed.

**Sectoral and Global Effects of Electronic Commerce**

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|---|
| As the development of networks reduces distances, there will be decreases in communication costs rather than increases. With companies publishing their products in the digital environment, the whole world will be able to access these products and a new competitive environment will emerge. New regulations will be needed in terms of finance and tax. |
| Along with large companies, small companies will also be able to provide services using these technologies. At the same time, developing countries will have significant opportunities to the extent that they benefit from these opportunities. Otherwise, this process may pose a threat to underdeveloped countries. |
| Intermediary agents and brokers will be reduced through information portals on the Internet. In addition, it will be learned in a short time how and from where the desired information, products, and services can be obtained through search engines. |
| Although large producers invest in service providers, causing a decrease in regional investments, this will further accelerate the transition from the industrial sector to the services sector. |
| Strong and successful companies will use advanced technology products, e-commerce, the internet, and digital tools more intensively. |
| As information proliferates, the Internet in developing countries will become easier to access and possibly more dependent to use. |
| Although the mobility of people decreases, mutual communication will be strengthened by establishing regional opportunities and mutual connections in developing countries. |
| English, which is currently used extensively, will become even more popular and will be the language of the internet and e-commerce. |
| The Internet will contribute to individual development by reducing the distance of time and space. |

Table 1: ILO, "Electronic Commerce: Some Implications…"**,** p. 4.

### 1.1.4. Benefits of e-Commerce:

E-commerce is perceived as an economic phenomenon; it also creates effects in social and cultural areas. E-Commerce: It is seen that it has different effects on individuals, companies, and society. Companies that adopt E-Commerce to conditions where customer expectations redefine the market or create new markets adapt faster and gain competitive advantage. On the other hand, new ways are offered to individuals that eliminate physical distance and time constraints in shopping, access to information and services, and

interaction with the public. With e-commerce, business processes will be shortened, daily work will take less time to follow up, costs will decrease, and productivity will increase. All of these are thought to increase the time that people spend except the working hours. In this respect, it is thought that electronic commerce will have both economic and social effects.

E-commerce's infrastructure, which can work 24 hours a day, 7 days a week, eliminates the problem of time-limiting communication and shopping.

The reliability of e-Commerce has been proven by statistics. Emerging new technologies are expected to further strengthen reliability.

With the infrastructure of E-commerce, consumers' preferences, habits, and demographic characteristics can be tracked and a "personalized" commercial relationship can be established between the buyer and the seller using this information.

E-commerce is universal. Competition has become global as the borders have disappeared with the internet. Among the products and services offered in this "global" competitive environment, those who can reach the highest level in the "quality-cost-customer service" triangle are successful in the "global" sense. These benefits are listed shortly below:

The company has a branch open 24/7 where it can provide information to its customers over the internet.

i. It saves time as data is transferred electronically within seconds.
ii. More product options are offered for the customer.
iii. Your virtual store can reduce your financial burden.

Since the stock and cost information is in electronic form, the supplier company does not have to stock up. The seller knows how many products have has in stock and how many of these products to sell.

i. It allows the supplier to create a virtual shopping center over the internet without the need for a large office.
ii. In a global environment such as the Internet, there will be no damage due to inflation, as there will be no easy fluctuations.
iii. Marketing in different channels, Company related products, prices, etc. Ability to quickly update information such as (social networks, email, viral marketing, etc.)

**Benefits for customers:**

i. It allows users to shop quickly without leaving home.
ii. The transportation cost of product price research is eliminated.

iii. Finds the opportunity to choose by seeing more product types.

iv. It is easier for you to find the product that fits your needs.

v. It has clearer information about the product thanks to the comments made by the users of the product.

**Benefits for Supplier:**

i. Companies have low-cost and accessible stores where they can sell their products.

ii. It is a platform where it can present detailed information about its products.

iii. They can sell according to the demand without having stock.

iv. It has a high opportunity to find new customers not only in the region where it operates but in the world.

v. Accessibility becomes easier.

### 1.1.5. Deeper Understanding of E-Commerce

The concept of e-business and e-commerce are used in the same sense. The concept of "e-business" is a structure with a more comprehensive meaning that includes the concept of "e-commerce". The concept of e-commerce will be discussed in a separate chapter. Many businesses and sectors have implemented successful applications with e-business. When considered in terms of businesses, it is seen that it contributes positively to costs. It has been observed that e-business applications also provide advantages for customers. Customers can transfer money online from one account to another account, track information about the shipment of the goods they ordered, and obtain products that they cannot find in stores.

E-commerce refers to the buying and selling of products and services over the Internet. Unlike e-commerce, electronic business is the medium in which all business activities are carried out over the internet. E-commerce is an important component of e-business. E-commerce includes money-related transactions, but e-business includes monetary and organized activities. E-commerce, customers, suppliers, distributors, etc. have an outward-looking approach. On the other hand, e-business has a media approach that covers internal and external processes. A website that can represent the company is necessary for e-commerce. Conversely, e-business requires a website, customer relationship management, and enterprise resource planning to run a business over the internet. The internet is used by e-commerce to communicate with the rest of the world. E-business, on the other hand, connects with parties using the internet, intranet, and extranet.

### 1.2. Development of the Internet and its impacts on E-Commerce

The rapid development of high technology and increasing international competition have been the main factors behind the structural change observed in the global economy. Today, countries and companies that use knowledge and technology well and turn to modern production and management techniques have a highly competitive chance and are ahead in the international economy. With this newly emerging technological infrastructure, the entire economic organization and social life are undergoing rapid change. After the second half of the 1990s, daily life and business life also underwent radical changes, as communication technologies gained a much larger dimension with the internet and the concepts of time and space disappeared. With the use of advanced technology products and the beginning of commercial activities in the internet environment, companies have had to abandon the old traditional management and production methods gradually and have turned to an organizational structure with less hierarchy. Electronic commerce applications, specially developed in the internet environment, have revealed different expectations for the future. The fact that electronic commerce is a new concept, and its size and development trend cannot be known exactly makes it difficult to measure its economic effects numerically. Despite this difficulty, it is a fact that e-commerce will spread rapidly in the coming years, primarily in information-intensive sectors, outpacing traditional commerce, and deeply affecting economic and social life.

With the global explosion of electronic commerce, some studies have started on the rules that regulate the structures of companies, customers, public institutions, and organizations in the national and international arena. This focus has revealed new opportunities and changed the economic infrastructure as it directs companies and markets toward increasing competitive advantages. Electronic commerce has had a significant impact on the formation of the market, in approaching the customer, and in transportation, by creating different channels instead of traditional commercial routes. Over time, this formation will create and expand wider, deeper, and more unpredictable effects.

As a technological phenomenon, the Internet can be used in all aspects by communities and countries with good income levels. Because of these differences in usage, the internet will contribute more to global economic growth and improved living standards. The process that emerges in internet and electronic commerce applications also manifests itself in the change of sectors and the formation of new ones. Therefore, digital transformation is not only related to advanced technology and knowledge-intensive sectors but also affects all organizations of economic life by spreading positive effects on many sectors of the economy. This interaction, along with the added value it provides in sectors where information

processing and communication technologies are strategically widespread, also reveals high-profit opportunities.

### 1.2.1. Intervention of the Internet:

The Internet is a network of hundreds of thousands of computers spread all over the world, interconnected, that can "talk" to each other. The word "Internet" is formed by combining the words "international network". At the core of this international network are computers (servers) that are constantly running, connected by high-speed connections. Both the state institutions responsible for telecommunication and private companies establish the backbones, that is, the main communication lines, that provide this connection in various countries. Connections were made from these backbones to Internet service providers, companies, universities, and more importantly, backbones in other countries. There are also many connections among them, and thus a multi-connected "network" is formed. The Internet is a technology that emerged after people's increasing demand for "storing/sharing the information produced and accessing it easily". With the help of this technology, people can access information in many fields easily, cheaply, quickly, and safely. As such, we can compare the Internet to a sea of information or a large library.

Information transmission and sharing on the "Information Network" is done within certain rules. These rules are called "internet protocols", or TCP/IP family of protocols for short. TCP/IP (Transmission Control Protocol / Internet Protocol) is the general name given to many data communication protocols that provide organization between computers and data transmission/reception units, thus enabling data communication from one place to another. In other words, TCP/IP protocols set the rules for data communication between computers. Examples of these protocols are file receiving/sending protocol (FTP, File Transfer Protocol), electronic mail (e-mail) communication protocol (SMTP Simple Mail Transfer Protocol), and TELNET protocol (*login* developed for interactive operation on another computer on the Internet). Protocol available. The protocol that enables the transmission of linked objects in the WWW environment, whose name we often hear, is called Hyper Text Transfer Protocol (HTTP). The TCP/IP protocol can also be used in other communication networks. It is particularly common in local area networks (LANs) that connect many different types of computers or workstations.

**Internet access:**

ICTs are now extensively accessible to the general population and are also reasonably priced. In 2007, when the majority (53%) of EU households got an internet connection, a line was crossed. In 2012 and 2014, this share surpassed three-quarters and four-fifths, respectively. The percentage of EU households having internet connectivity increased to 92% by 2021, up almost 20% from 2011.

One strategy for fostering a knowledge-based and educated society is to provide widespread and affordable internet connectivity. In all EU Member States, broadband was by far the most popular form of internet access; 90% of households in the EU used it in 2021, up 25% from the share seen in 2011 (65%).

**Dot-com bubble of 2001:**

In the late 1990s, client confidence issues first surfaced. Customers were concerned that their credit card information might not be secure due to notable denial of service (DOS) attacks on well-known websites. Online businesses got significant capital injections during this time via initial public offerings (IPOs), and their shares sold for prices that were significantly higher than the true value of their enterprises. Speculators pushed up the value of stocks in Internet companies as a result of the fact that many businesses had excellent concepts but weak business plans. The first blows came when several online businesses started disclosing significant losses and investors started questioning the feasibility of online business ideas. Stock prices fell below their true value because panicked investors started to sell their holdings. Several well-known businesses, including eToys, shut down. Between 2001 and 2002, a lot of other businesses that lacked strong business models failed.

E-business today includes everything from straightforward company information websites to online storefronts. Online language instruction is one of the cutting-edge applications for new speech and video communication technologies. The use of the Internet for research is now widespread, and large commercial information repositories are expanding. Online sales from online shops are still increasing. Online retailers like Apple, Amazon, and Barnes & Noble have more recently started selling digital material in the form of eBooks and music files.

### 1.2.2. History of the Internet and relation between e-commerce:

The roots of the Internet were discovered in 1962 by J.C.R. We can find it in the concept of the "Galactic Network" that Licklider discussed at Massachusetts Institute of Technology (MIT), one of the largest universities in America. With this concept, Licklider stated that anyone can access data and programs from anywhere in a globally connected system. In October 1962, Licklider became head of the computer research division of the Defense Advanced Research Project Agency (DARPA), the American Military Research Project. Lawrence Roberts and Thomas Merrill, researchers at MIT, made the first-time computers 'talk' to each other in 1965. At the end of 1966, Roberts started working at DARPA and proposed the project

called "ARPANET". The first connection within the framework of ARPANET was made with four centers in 1969, and the first form of the Internet emerged with connections between hosts. The first four centers that made up ARPANET were the University of California at Los Angeles (UCLA), the Stanford Research Institute (SRI), the University of Utah, and most recently the University of California at Santa Barbara (UCSB).

In a short time, computers in many centers were connected to the ARPANET network. In 1971, it started to work with a protocol called Network Control protocol (NCP-Network Control Protocol). A successful demonstration of ARPANET with NCP was carried out at the International Computer Communications Conference (ICCC) held in October 1972. Also, this year, electronic mail (e-mail) was used for the first time in ARPANET. A new protocol, which brought more new possibilities than NCP, was introduced in ARPANET on January 1, 1983, under the name Transmission Control Protocol (Internet protocol TCP/IP). TCP/IP took its place as the main link of the internet network that exists today. In the mid-1980s, the American military computer network affiliated with the Department of Defense (DoD) left ARPANET and established its network under the name MILITARY NET. In 1986, the American scientific research agency 'National Science Foundation (NSF) put forward a comprehensive package of proposals for ARPANET, which included the establishment of five major supercomputer centers nationwide. ARPANET was organized as NSFNET with a subsidy from the American government. With its reorganized internet restructuring plan in 1987, NSFNET announced that it would operate a 1.5 Mb/s (previously 56 Kb/s) strong backbone over seven regional points.

The privatization process, which started in 1990 with the joint operation of NSFnet and private companies, was completed in May 1995 with the complete withdrawal of NSF from the internet backbone operation. Since 1995, the US internet backbone operation has been completed in the hands of private operators. In terms of the magnitude of the transformation it has caused, the revolution created by information technologies is compared with the inventions such as steam, railway, and electricity that led to the Industrial Revolution. Just as the invention of electricity and automobiles has improved people's living standards, such an effect of the Internet has begun to be seen. However, an important difference can be seen in information technologies: The rate of spread. After the first railway was opened in 1830, the rate of railways owned by developing countries reached only 30%. Yet, just 10 years after the start of the Internet revolution, the number of Internet subscribers in developing countries is 10% of all subscribers worldwide. When the time taken for communication tools to reach high user numbers is examined, the importance of the internet is more evident.

TOTAL POPULATION: 7.99 BILLION  URBANISATION 57.1%

UNIQUE MOBILE PHONE USERS: 5.48 BILLION VS POPULATION 68.6%

INTERNET USERS: 5.07 BILLION VS POPULATION 63.5%

ACTIVE SOCIAL MEDIA USERS: 4.74 BILLION VS POPULATION 59.3%

E-commerce is expanding quickly due to factors including various payment options, advancements in product delivery, and an increase in the number of conscientious customers, in addition to the increased use of the internet and mobile devices. When the retail e-commerce sales in the world between 2014-2018 are analyzed, the sales volume increased from $1.3 trillion in 2014 and reached $2.8 trillion in 2018. Retail e-commerce sales, which were 3.535 trillion dollars in 2019, are expected to reach 6.542 trillion dollars in 2023. In 2018, an estimated 1.8 billion individuals globally made purchases online.

The growth in global internet access is among the main causes of the rise in e-commerce sales volume. According to the report "Digital 2020: Global Digital Overview", it has been determined that 59% of the world's population of 7.75 billion has internet access. Internet usage, on the other hand, increased by 7 percent (298 million new users) compared to January 2019.

**Internet Usage and Population Data in the World:**

| World Regions | Population (2022 Est.) | Population % Of World | Internet Users 30 June 2022 | Penetration Rate (% Pop.) | Growth 2000-2022 | Internet World % |
|---|---|---|---|---|---|---|
| Africa | 1,394,588,547 | 17.6 % | 652,865,628 | 46.8 % | 14,362 % | 11.9 % |
| Asia | 4,352,169,960 | 54.9 % | 2,934,186,678 | 67.4 % | 2,467 % | 53.6 % |
| Europe | 837,472,045 | 10.6 % | 750,045,495 | 89.6 % | 614 % | 13.7 % |
| Latin America/Carib. | 664,099,841 | 8.4 % | 543,396,621 | 81.8 % | 2,907 % | 9.9 % |
| North America | 374,226,482 | 4.7 % | 349,572,583 | 93.4 % | 223 % | 6.4 % |
| Middle East | 268,302,801 | 3.4 % | 211,796,760 | 78.9 % | 6,378 % | 3.9 % |
| Oceania/ Australia | 43,602,955 | 0.5 % | 31,191,971 | 71.5 % | 309 % | 0.6 % |
| WORLD TOTAL | 7,934,462,631 | 100.0 % | 5,473,055,736 | 69.0 % | 1,416 % | 100.0 % |

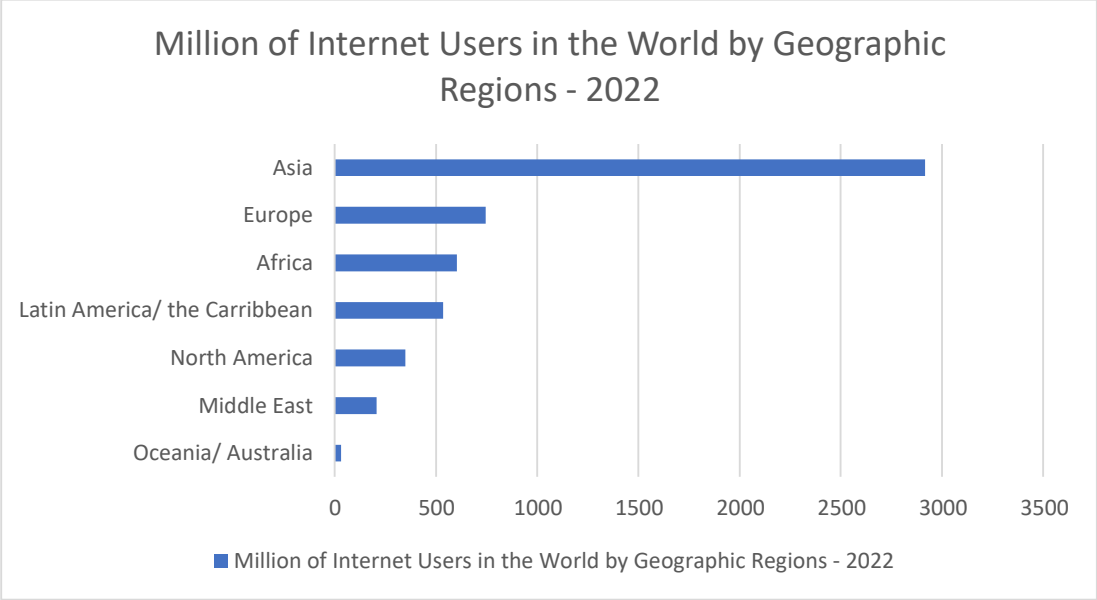
Table 1.2. https://www.internetworldstats.com/stats.htm

Electronic commerce not only creates a business and development opportunity for existing companies, but it is also a great opportunity for the formation of a new company and sector. The Internet does not shape all industries equally. Although the forms of manufacturing in the textile sector continue, financial institutions using electronic commerce gain serious competitive advantages since the transaction costs in the financial sector have decreased considerably.

Changes in information and communication technologies have led to changes in all areas of life. This structuring, which is almost a communication revolution, has a profound effect on the development of trade in the world and shapes its future. With this effect, many sectors will undergo the following changes with different accelerations.

If companies implement the educational process related to information technologies as necessary, internet and electronic commerce applications will lead to transformation and some sectors will be affected more than others. This change will be felt more deeply and rapidly in developing country economies (in proportion to the strength of their sectors). Knowledge-intensive activities (finance, education, cultural industry, consulting, design, translation, accounting, communication, and public services) will be effectively transformed by connectivity, cheap transaction, and strong cohesion.

The biggest advantage of electronic commerce from company to consumer (B2C), which includes digital products, is that it can carry its products to customers' computers over the network. This type of development has had its impact on five broad areas: entertainment, travel, newspaper/magazine, financial services, and electronic mail (e-mail).




Graph 1.2. Internet World Stats – www.internetworldstats.com/stats/htm

Basis: 5,385,798,406 internet users estimated on June 30, 2022

In advanced knowledge economies, access to the internet has been widespread throughout the business world and has reached saturation point. In this sense, there are not many differences between America, Europe, and Japan. There are some differences in internet connection preferences. There is generally a trend towards higher band connection methods. In addition, it will be ensured that companies reach the average bandwidth that is like more developed countries. In addition, the average bandwidth in Europe will have decreased considerably, as the internet infrastructure in the former eastern bloc countries that will be admitted to the European Union is weak.

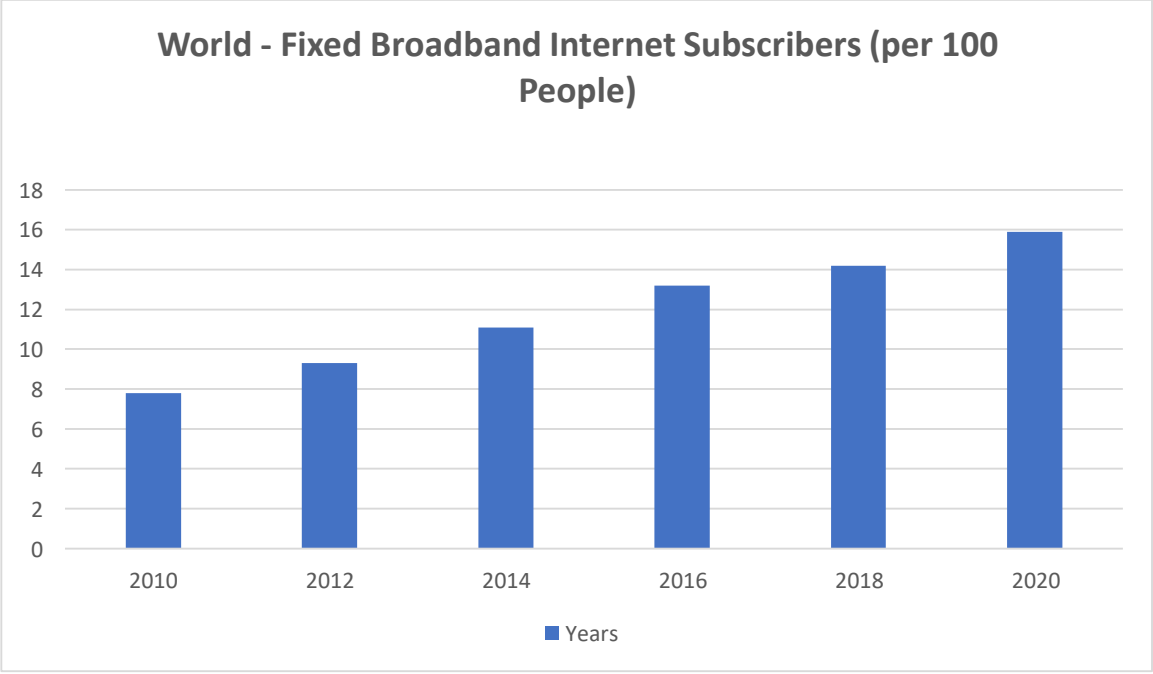
### 1.3. The Digital Divide: The Growing Technological Gap Between Countries

Developments based on electronic commerce and information processing technologies have allowed the new economy, also known as the digital economy, to progress at an astonishing pace. This development has brought different perspectives and approaches on this issue as well as on many other issues. Parallel to the anti-globalization thought especially seen in the globalization debates, there have been movements of ideas against the "digital world" approach. The concept of the "digital divide", which is based on the idea that it causes global inequality based on technological power, reveals this idea more clearly.

The concept of the digital divide highlights the gap between countries that have digital technologies and those that do not. It is not possible to talk about the digital world, especially in countries that lack technological infrastructure. On the other hand, the technological infrastructure advantages of developed

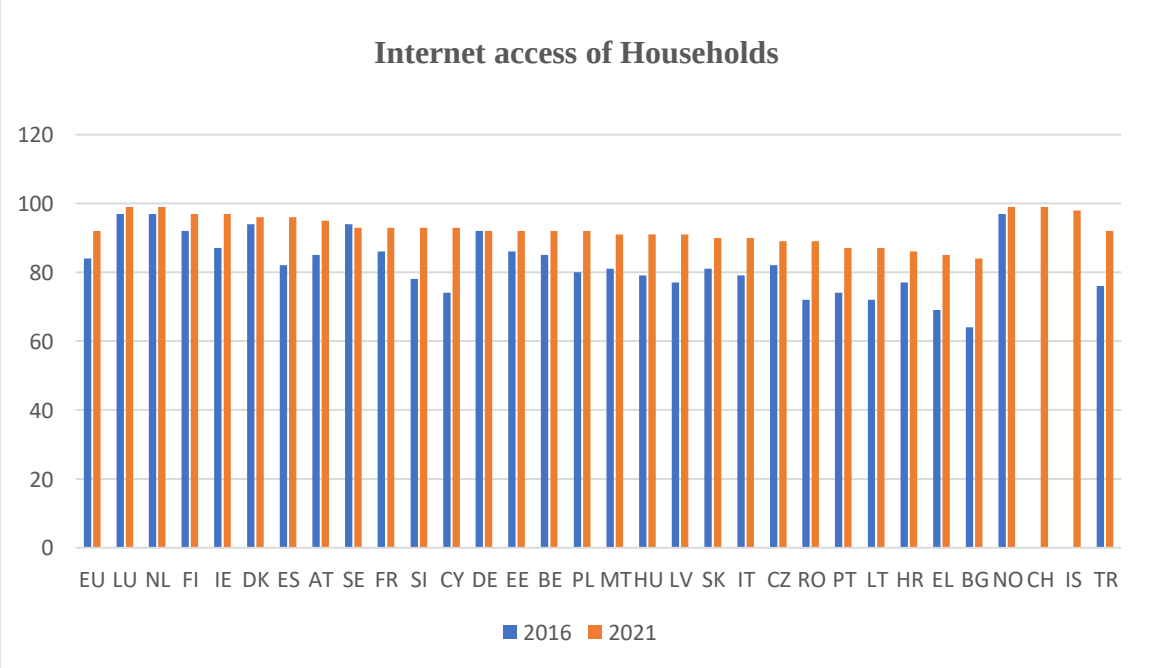
economies and their adaptation to the digital world demonstrate the superiority they have achieved over developing countries. In addition, depending on the mentioned superiority, the gap between developed and undeveloped economies is getting wider day by day. In the future, the digital divide between countries will deepen, as the best jobs and investments will go to places with a knowledgeable workforce, infrastructure, and democratic government. The knowledge gap can be between countries as well as between people living within the same country. For people to fully adapt to the digitized world, they need to learn enough new words and concepts (1200 of them) to learn a new language. In addition to the division that exists between people, there is also a gap within people, and they need to learn how to use thousands of information and news that they can easily reach every day.

In the context of the stated inequality and abyss, the existence of many economies that do not have the power to follow technological developments is worrying in this sense. If the necessary measures are not taken, the process will develop in favor of the previously developed economies. However, the situation that seems to be in favor of developed economies may have an adverse effect after a while and lead to negative consequences on developed economies that must consume what they produce themselves. The digital competence gap between developed countries and developing and underdeveloped countries reflects itself in many ways. Graph 3 below reflects only one of the differences that exist between certain regions and organizations (in terms of internet users).




Graph 1.3. WorldBank, tradingeconomics.com

The digital divide between the rich developed world and developing countries is clear when comparing Central Asian and Eastern European countries with high-income OECD countries. In 1999, more than 25% of residents in high-income OECD countries used the internet, while this rate was around 6–7% in Central Europe and the Baltics, and around 1–2% in Southeast Europe and the Commonwealth of Independent States (CIS). However, it is expected that these differences will gradually decrease because of investments made by multinational companies in developing countries. The importance of the Internet makes itself felt in many areas of life. The increase in its use due to the increase in demand in the world increases the potential importance of this technological, commercial, and social tool. However, the fact that the production and use of technology are intense in developed countries further increases the gap between the less developed countries in the south and the developed countries in the north.




Graph 1.4. Eurostat (online data code: isoc_ci_in_h)

ICTs have a significant impact on people's daily lives in numerous ways, including communication and online shopping for goods and services, which can happen at work and h. EU regulations cover a wide range, from regulating entire industries like e-commerce to attempting to safeguard an individual's privacy. Therefore, many people believe that the growth of the information society is essential for creating the framework for a contemporary, competitive economy.

### 1.3.1. Impacts of the information on Society:

The rapid developments in information processing technologies and the increase in information-based activities in recent years have initiated the transition process from an industrial society to an information-based society. The concept of information society refers to societies that use information technologies in the production of all kinds of goods and services. In other words, the information society is a society that produces high-level mass information and uses this information in all areas of social life, unlike industrial societies that produce and consume large amounts of durable consumer goods. In the simplest terms, an "Information Society" can be described as an "Industrial Society" as mass production systems are replaced by new technological developments and information comes to the fore. In the new social structure, the "matter" existing in the industrial society is replaced by "information". It is a known fact that the rate of transition from an industrial society to an information society is much higher than the rate of transition from an agricultural society to an industrial society. The reason for this is that society is more sensitive to new developments and has more technological opportunities.

**The main values of the new society:**

| *Traditional* | | *New* |
|---|---|---|
| **Production System** | The existence of production systems based on human and machine power. | At the beginning of the information society, a qualified workforce came to the fore. However, with the increasing substitution of human labor with information technology, knowledge is replacing the workforce. |
| **Variable elements** | In the industrial society, new production technology has brought together the need for raw materials and the search for new markets. | In the information society, with the effect of globalization, factors such as market structure, customer structure, and cultural, social, and technological are changing. |
| **Environmental Impact** | In the industrial society, big cities were formed as the factories attracted large population concentrations. Problems such as unhealthy environment, incomplete education, and health system were encountered. | In the information society, the cities are more well-maintained, and the environment is given importance. |

| | | | |
|---|---|---|---|
| **Change in Production** | There are tangible production and physical capital investments. | | In the information society, information production and knowledge take the place of material production and capital. Growth and development are not based on physical capital investment, but on knowledge produced through innovations. |
| | **Workplace** | In industrial society, businesses are the most important factor in the socioeconomic process. | Volunteer communities are the most important actors in the socio-economic process in the information society. |
| **Structure and Values** | Single-center, the dominance of 3 sectors. Satisfaction of material needs. | | In addition to the polycentric, participatory democracy and 3 sectors, the "intellectual sector" has come to the fore. Satisfaction with achieving goals. |

Table 3: Author

With the information society, the functions, policies, and roles of many institutions are changing. It is possible to observe this change in four ways: First, institutions can access information much more quickly and more than before. Second, through global networks, the decision-making mechanisms of institutions can become more centralized or local. Third, global networks are destroying the information monopoly held by the public and multinational companies. Fourth, many problems such as global warming, and national problems of countries that concern the world can be reflected on the world agenda more transparently through global networks. Information societies are culturally and politically different from industrial societies. In the face of the centralized culture of the industrial society, a decentralized, pluralistic, and original thought, shaped by a post-modern theoretical infrastructure, began to dominate in the information society. Diversity and human social values are a value that stands out as a subject. In the idea of modernization of information societies, it is accepted that countries reach an advanced stage without giving up their cultures completely. Politically, the majority-based parliamentary democracy of industrial societies tends to be replaced by participatory democracies that consider the demands of small groups more in information and communication societies. The transition process from an industrial society to an information society brings with it both hope and anxiety. According to some authors, in this process, the disparity in the distribution of wealth and income will decrease, and the understanding of freedom, justice, participatory democracy, and the social welfare state will become widespread. The worrying aspect is that these developments will further deteriorate the inequality between developed and developing countries, cause a brain drain and information fluctuation, and it will not be possible for concepts such as democracy, justice, national values, social welfare, and freedom to be realized only in words.

### 1.4. New Economy:

Several developments that started in the mid-1980s and accelerated especially in the last half of the 1990s brought the concept of a "New Economy" to the world agenda. The emergence and appreciation of many businesses based on technology and digitalization have drawn attention to the new economy. The origin of the new economy concept is America. The new economy showed a great boom after the 1990s. The basis of the new economy, which has led to major structural transformations in the economy in the last 15-20 years, is knowledge-based. The new economy is developing with a complex structure, covering all fields and subjects, with its borders beyond nations, where there are no cables in communication, with very high value-added productions, investments that carry risk, and with the effect that can change the current commercial rules and laws.

The information and communication-based new economy have the following features:

- Constantly accelerating technological developments,
- Increasing informatics and knowledge-intensive activities,
- Shortened product life cycle,
- Globalization of markets,
- Network Economy.

**From Local to Global**

Electronic commerce facilitates the international promotion and distribution of the product, opening new opportunities for successful economies of scale. By providing direct access to distant markets, electronic commerce creates an increasing effect on global trade and therefore globalization. Companies have to produce and market their products and services by targeting the whole world, not only within the borders of the country, using advanced information processing and communication technologies provided by the new economy. Not only marketing and sales concepts, but also all processes, from raw material procurement to employee procurement, should be projected with a global mindset.

With electronic commerce opportunities, local and global differences disappear. Therefore, even if the market area is a local region, any problem should not be experienced in the field of 'global competition. Electronic commerce applications naturally encourage companies to think globally from thinking locally. There will no longer be any talk of commercial activities in a narrowly localized area. In electronic commerce, neither the existence of local companies nor the existence of different geographies will be valid.

Problems such as what a company will do, how it will do it, and where it will do its activities in the next 20 years will no longer be valid.

The concept of competition has changed with the phenomenon of globalization. The competition has ceased to be local and has covered the whole world. Therefore, companies need to produce goods and services at a quality and price that will compete all over the world. Organizations that produce world-class goods and services can increase their sales by using the internet, especially in a crisis environment. Two computer users, who do not know each other at different ends of the world, can meet each other in a virtual environment without ever meeting each other, and can exchange manners, information, culture, or goods with each other.

Electronic commerce acts as an important bridge to reduce the distance between developed and underdeveloped countries. Developing country companies will be able to get rid of the obstacles of distance to developed markets and international borders in a short time thanks to the ignorance of time and space provided by electronic commerce and the conveniences provided by flexible applications.

In today's globalizing information economy, an entrepreneur with a project and idea, computer and internet access can easily establish a global company in global world markets. Therefore, the high costs required for the establishment of the traditional company have been replaced by the minimum materials that many computer users have. Thus, with electronic commerce, companies will move away from the local and have a global market understanding, as in the traditional way. Some firms offer intangible services such as advice, content, and advice online. Others sell physical products such as toys, jewelry, and electronics, both locally and internationally, and ship them to their customers. These two different types of companies ensure that products and services are personalized and popularized by using new methods with the benefits of reaching the global market, reducing transaction costs, and creating high-added value through the internet.

**Comparison of Industrial Society and New Economy Society in terms of Social, Economic, Political and Technological Systems:**

| Industrial Society | New Economic Society |
|---|---|

| | | |
|---|---|---|
| **Economic System** | • National economy<br>• Economy based on physical capital<br>• Industrial organizations<br>• Symbolic paper money dominance | • Global Economy based on human resources and knowledge capital<br>• Knowledge-based organizations<br>• Digital currency dominance |
| **Social System** | • Family<br>• Institutionalizations that provide security<br>• Compatibility, exclusivity, social class values<br>• Massive periodic education | • Different individual-centered family forms<br>• Institutions that develop individual talents<br>• Values of individuality, diversity, participation<br>• Individualized lifelong learning |
| **Political system** | • International conflict and polarization<br>• Centralization<br>• Nation-state<br>• Management for security purposes | • International harmony and political integrations in the global context<br>• Decentralization<br>• Global and regional organizations<br>• Individual-oriented management |
| **Technological System** | • Mechanical technology revolution<br>• Machines replacing the workforce<br>• Production techniques based on the assembly line<br>• Communication systems based on visual and print media | • Information technology output<br>• Computers that develop brain power<br>• Production techniques based on information and communication technologies<br>• Communication systems based on the internet and digital technologies |

Table 1.4. Choong, Kwee Keong, and Patrick W. Leung. *Journal of the Knowledge Economy* 13.2 (2022): 1573-1610.

The new economy also called the digital economy (or network economy), is based on the digital revolution and the management of the information sector. With the directing of labor-intensive jobs to low-income countries, developed countries have shifted to knowledge-intensive products, which are the trigger of the new economy by producing advanced technology that requires know-how. In these countries, the way businesses do business, and their business processes have become highly differentiated, and new business models that increase efficiency and reduce costs have been adopted.

The new economy has four important components. These are:

i. Digitization–Internet,
ii. Research and development (R&D) activities,
iii. Globalization,

A radical change in the human resources profile, transition from manual workers to office workers. In general, all jobs created with information technology and electronic commerce communication infrastructure are described as the new economy. The indicators of the growth of this economic model are often the subject of debate. Shares of tech companies are rising, in contrast to the falling values of old traditional businesses. While this is a hope for the future, it also causes an uncertain process and intense change. The stock market values of many IT companies that emerged in the United States increased a lot at first, then entered a very rapid downward trend and followed a fluctuating course. (Zemtsov et al. 2022)

The factors affecting the change of new commercial models also shape the supply chain links between producers and consumers. With the emergence and development of electronic commerce applications, the balance of power in favor of the customer has changed in the market. The definitions of how customers choose, learn, purchase, and use products and services are being redefined. Due to the compelling reasons that have arisen, the new supply chain will be completely customer-oriented rather than product-oriented. New supply chains will know each customer structure and concentrate on producing the product and service that suits it. Supply chains that will exist in the future will establish their infrastructure by targeting 100% customer needs and satisfaction. With the global understanding of supply and demand, many distribution channels will either change or must be closed. Multinational companies hold the distribution of many products in the world. However, with the opportunities provided by information processing and communication technologies, easy access to information is provided for small companies. It is no longer a secret where and how export-focused companies in any part of the world produce, and these companies are close enough for any company to reach using the internet and search portals, and to purchase products and services by communicating. Therefore, the internet reduces the role of intermediaries and increases the rate of profits.

**Factors Uncovering the New Economy**

| | |
|---|---|
| **Information:** | The new economy is the knowledge economy. |
| **Digitalization:** | The new economy is digital. |

| | |
|---|---|
| **Virtual world:** | As the nature of information and communication changes from analog to digital, the nature of economic activities is changing. |
| **Colocalization:** | Organizations that form the basis of economic activity give way to molecular and to this extent dynamic units. |
| **Integration/Networking:** | The new economy is a network economy. |
| **disintermediation:** | Intermediary transactions, businesses, and individuals are disappearing. |
| **Meeting at one point:** | All sectors in the new economy are in the computer communications and content industries. |
| **Innovation:** | The ability to innovate is the most important dynamic of the new economy. |
| **Wage–Consumer:** | Thanks to technologies that enable interactive relations, the boundaries between producer and consumer are disappearing in the new economy. |
| **Speed/Immediacy:** | Speed is one of the most distinctive features of the new economy. Real-time transactions have provided incredible speed in contracting or renewing production, marketing, accounting, and inventory operations. |
| **Globalization:** | In the new economy, geographical boundaries are disappearing. The concept of the nation-state is losing its importance and the dependency between countries is increasing. |
| **Conflict:** | Social contradictions and conflicts tend to increase. There is a growing divide between those who possess and those who do not. |

Table 1.5. Zemtsov, Stepan P., Vladimir M. Komarov, and Vera A. Barinova.*Экономика региона* 18.1 (2022): 92-104.

The new economy is shaped because of the transformation of the “old” economy with the application of information and communication technologies. Although there are changes in the market structure and costs, some developments such as e-commerce brought about by the new economy may take time or difficulties may be encountered. Perfect competition, the disappearance of many middlemen, zero transaction costs, and the creation of a fully harmonious global market will be directly proportional to the investments of countries on the world scale in advanced technologies. The new economy is knowledge-intensive and knowledge-first. The production and processing of information is the most important source

of technological development and economic growth. In the new economy, knowledge is the tool that provides the highest added value in the organization of production and management of products and services. In the new economy, knowledge is seen as a commodity that is different from the source and adds value to the product and service. These developments enable the development of information technologies, in which information is used both in the production and use stages, and it becomes widespread to the extent that it is used in all other sectors.

The features of the new economy are:

i. The cost of knowledge production is much lower than the cost of industrial production. The value of knowledge economy companies can compete with giant industrial companies.
ii. In the traditional economy, the geographical location had a strategic importance. In the new economy, the concept of distance has lost its importance. For example, Amazon was able to sell books to 160 countries in three years with the advantages of electronic commerce.
iii. Again, the concept of time has disappeared in the new economy. On the Internet, companies can instantly communicate and transact with each other and with their customers.
iv. Knowledge and people are very important in the new economy. Brain power plays a critical role in the new economy.
v. A new product can be promoted and sold quickly on the Internet, and if the product is adopted by the consumer, it causes a sales explosion.
vi. Market share has become the main factor determining the market value of companies. Some companies distribute free products on the internet to increase their market share, thereby increasing their market value.
vii. The share of knowledge-based parts of products in the total value is gradually increasing.
viii. With the new software, it has become easier for customers to make price comparisons.
ix. It has become possible to reach the desired product instantly and to buy it online.

With the new economy, the human capital, physical capital, and intellectual capital of the companies take on a role that closely complements and interacts with each other. There is often a huge difference between the market value of new economy companies and their tangible capital. This difference, which is explained as human capital but cannot be materialized, is a concern and risk for investors. Firms that have invested in new economy companies in the stock market in recent years have suffered losses due to the decreases brought about by these risks and concerns.

As a result of the emergence of the information society and the new economic structure and their mutual complementation, a new phenomenon has entered economic life. The combination of advanced technology products and the purpose of accessing and processing information at a common point has revealed the infrastructure of the internet. The internet is the backbone of the new economy. Opportunities brought by the Internet to the business world have emerged as electronic commerce.

In a knowledge-based economy, companies strive not only to advance their internal processes but also to provide all employees with the knowledge they truly need and manage that activity. Information and communication-based applications play an important role in the management of external relations. In the 1990s, there was a revolution in the infrastructure and speed of electronic mail (e-mail) communication. In this development process, new applications have been developed to facilitate the coordination of projects of different partners and to facilitate harmony between companies. (Komarov et al., 2022)

**Company Annual Reports:**

| Rank | Company | HQ | Revenue (US$bn) 2020 | Revenue Growth (YoY) (%) | Net Profit (US$bn) 2020 | Net Profit Growth (YoY) (%) |
|---|---|---|---|---|---|---|
| 1 | Amazon | United States | 386.1 | 37.6% | 21.3 | 84.1% |
| 2 | JD | China | 108.1 | 29.4% | 7.2 | 305.9% |
| 3 | Alibaba | China | 104.0 | 40.9% | 21.8 | 0.8% |
| 4 | Vipshop Holdings | China | 14.8 | 9.6% | 0.9 | 47.2% |
| 5 | Wayfair | United States | 14.1 | 55.0% | 0.2 | 118.8% |
| 6 | Rakuten | Japan | 13.7 | 18.1% | -1.1 | -267.2% |
| 7 | Coupang | South Korea | 12.0 | 90.8% | -0.5 | 32.0% |
| 8 | eBay | United States | 10.3 | 18.9% | 5.7 | 217.3% |
| 9 | Zalando | Germany | 9.1 | 25.4% | 0.3 | 130.9% |
| 10 | Pinduoduo | China | 8.6 | 97.6% | -1.0 | -3.2% |

Table 1.6. GlobalData Intelligence Center and Company Annual Reports

In a knowledge-based economy, companies strive not only to advance their internal processes but also to provide all employees with the knowledge they truly need and manage that activity. Information and communication-based applications play an important role in the management of external relations. In the 1990s, there was a revolution in the infrastructure and speed of electronic mail (e-mail) communication. In

this development process, new applications have been developed to facilitate the coordination of projects of different partners and to facilitate harmony between companies.

Since very successful companies also have the necessary financial resources, they equip them with investments that will give them competitive advantages to strengthen their infrastructure with new technologies. Firms that achieve limited success with limited budgets, on the other hand, lag in this regard. Although this situation may seem unfair, the market and innovations have a driving effect on economic development and growth in terms of their evolutionary dynamics. The digital divide reveals its other dimension in the globalization process. A direct relationship can be established between new technologies and e-commerce. In this respect, while e-commerce technologies are used and spread throughout the world, it is not possible to produce them on a global scale. Between globalization and e-commerce, as a result of the spread of high-tech products around the world, there is a one-sided (in favor of developed countries that produce IT) globalization. With globalization, the idea that the division experienced in the world (continuously rich countries on the one hand, and constantly impoverished countries on the other) will be experienced at an even more serious rate because of not keeping up with technological developments is becoming widespread. With the escalation of economic imbalances, on the one hand, some communities benefit from many opportunities, on the other hand, some people and countries work with very small rewards and have no social security.

Therefore, in this sense, countries that cannot follow technological developments and do not have infrastructure will always regress when compared to countries with technological power, both in terms of economy and level of development. After the inequalities are experienced in this aspect, it will be witnessed that the countries will be differentiated differently. It should not be overlooked that such a prerequisite is important for the continuity of the system in the digital world order, just as the need for developed countries to increase the purchasing power of developing countries to increase demand has emerged. In other words, in the global market, it will be possible to prevent the gap between the technology and production areas transfers to be provided by the developed countries to the underdeveloped countries and to increase the demand for the information processing technologies produced in this way.

Technology transfer will have a significant impact on reducing the digital divide, thanks to investments from developed countries to developing countries. With the increase in foreign investors heading to developing countries, both technology transfer will take place and the number of management and employees of domestic and foreign companies that will use them will increase. With the investments of international companies in developing countries, both employment will increase and the adaptation of employees to new technological developments will be ensured. Thus, these developments will reflect on all

layers of society and will lead to increases in the production and use of information processing and communication technologies in general.

**Electronic commerce has two aspects in supply chain management.**

i. Vertical integration between commercial partners (integration of companies sending the order and companies providing logistics service)
ii. The emergence of completely new companies and functions

Since the main usage area of the electronic commerce environment is from company to company (B2B), it is possible for companies, especially small and medium-sized companies, to integrate with internal and global supply chains. Companies that are stuck in a narrow geographical area in the traditional understanding of supply and demand chain will be able to participate in the environments where the largest companies in the world exist, with their participation in electronic commerce applications made from company to company (B2B). Thus, thanks to the internet, small and medium-sized companies will be able to participate in the purchases of large producers and buyers through electronic commerce in developing countries.

**The effects of electronic commerce on the new supply chain are briefly listed below:**

i. Reduction in cargo costs: Electronic commerce allows documents sent via cargo companies to be exchanged and sent over the internet. Companies that produce products and services will be able to follow the processes without the need for money and time required in traditional document delivery with electronic commerce.
ii. Change in distribution systems: Electronic commerce offers new flexibility for companies to manage complex information and product movements with other companies and their customers. Links between distribution centers and customers will become closer. With the new supply chain, customers will be able to manage the increasingly complex movement of information and products more easily.
iii. Customer focus: Electronic commerce is a vital element in the support of logistics and transport services for both internal and external processes (customers). Customers will enjoy many benefits such as less cost, better delivery, and fewer disruptions.
iv. Monitoring of processes: Electronic commerce provides companies with full-time monitoring and access to information for cargo loading and subsequent processes.

Electronic commerce provides companies in developing countries with "e-service" (call center, back-office, data process) delivery opportunities, thus reducing labor costs and enabling them to have comparative advantages. Thanks to this transformation in developing countries, there are regional changes in the supply and demand chain. It is stated that developing countries that invest in new computing technologies where labor is cheap, can adapt, and are welcoming to foreign capital will be the center of the new supply and demand chain cycle.

Even if the new companies are successful and reliable, they should be prepared according to the requirements of the online world and avoid traditional commercial habits. For the supply and demand processes to be effective with the companies they work with and to improve the processes by existing in the online environment, human resources must be willing, and the company must be ready in terms of technical infrastructure.

**National Innovation System (NIS)**

The NIS approach, which was developed in different parts of the USA and Europe in the 1980s, continues to spread among policymakers as well as academics around the world today. C. Freeman took the first steps of this approach in 1987. Following Freeman, Lundvall and R. Nelson made important contributions to the field. After this date, the innovation systems approach has continued to attract attention because it has a very robust and adaptable structure and produces important information on various issues within the innovation process in the era of globalization. Although NIS seems to be a new approach, Freeman (1997) states that the origins of this approach can be traced back to Friedrich List (1841)'s "National Political Economy System" approach. Freeman argues that List fails to recognize the factors that are important to any modern industrial economy (such as investment, institutions, imports of foreign technology, education and training, and the broad links that exist between them), thus using the concept of a national political economy system rather than the NIS concept. stated that he preferred it (Peters, 2006: 18-19).

Some developments necessitating the establishment of the NIS;

That innovation is based significantly on the interaction between scientific studies and firm work,

- The speed in the development of science and technology and more competitive markets lead businesses to innovate faster,

- The partnerships and networks created between enterprises become more important than in the past and with the increasing inclusion of information-intensive sectors into the system, economies gaining a global appearance (Uzkurt, 2008: 212).

The table contains the definitions of NIS. The broadest definition is given by Niosi (1993) and Metcalfe (1995)

**Definitions of NIS**

| | |
|---|---|
| Freeman (1987) | It is the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and disseminate new technologies. |
| Lundvall (1992) | Elements and relationships that interact and exist within a country's borders in the production, dissemination, and use of new and economically useful knowledge. |
| Nelson and Rosenberg (1993) | It is a group of institutions whose interconnections control how innovatively well national enterprises perform. |
| Edquist and Lundvall (1993) | A national innovation system is formed by economic structures and institutions that affect the direction and rate of technological change in society. |
| Niosi et. Al. (1993) | A national innovation system, which aims to produce research and technology within national borders, is made up of universities, government institutions, and private and public sector businesses (both small and major corporations). The purpose of the interaction between these units; The development, protection, financing, or regulation of new science and technology. The interaction |

| | |
|---|---|
| | between the units in question; can be technical, commercial, legal, social, and financial. |
| Patel and Pavitt (1994) | In a country, incentive structures and competencies are the systems of institutions that determine the rate and direction of technological learning (or the volume and composition of change-making activities). |
| Metcalfe (1995) | It is the set of different institutions that collectively and individually contribute to the development and diffusion of new technologies, implement policies to influence innovation processes, and provide a framework for innovation in its management form. Such a system; is a system of interconnected institutions to create, accumulate and transfer knowledge, skills, and artifacts that determine new technologies. |
| Galli and Teubal (1997) | The establishment of a particular organization and institution is the creation of necessary links for the production, diffusion, and application of scientific and technological knowledge. |

Table 1.7. Feinson, 2003: 17 and Peters, 2006: 20.

The NIS approach's view of innovation studies in a broader macroeconomic framework and closely linked to education policies provide a more realistic picture of development processes. This systemic approach may also provide a better opportunity for policymakers to identify leverage points or weak points within the network structure. Studies on NIS in general; argue that public and academic studies can support the technological activities of firms, but cannot replace technological activities, that the development of human capital through education and training is necessary to encourage the absorption capacity, and that economic policies should be aimed at ensuring international competitiveness (Feinson, 2003: 19). A general framework of the NIS is given in Table 1.8.

**NIS in General**

Acquiring new technologies related to products or production methods; assimilating and using; enabling these technologies to spread to all spheres of activity of the economy.

Product development, ability to design new products; developing the production method along with the new product design, being able to design a new method.

Being able to design and manufacture the production (process) machines required by the developed or newly found production management.

To be able to continue the technological research and development activities that feed the design and production processes; to be able to produce the technologies needed by using scientific findings and to produce the science that is the source of those technologies.

It refers to a system of national organizations with the ability to develop organizational methods that regulate and reproduce the relations both within and between themselves and between the research, development, design, production (manufacturing), marketing processes, and the relations between them. The national innovation system includes all kinds of institutions necessary for the existence and maintenance of the listed talents.

Table 1.8. DPT, 2000: 9-10.

**Knowledge, Learning, and Innovation in the Framework of the NIS**

This has led to the formation of a more satisfactory theoretical basis for innovation systems (Lundvall, 2005: 22). Economies are entering a period dominated by learning and information processes, which are very important for maintaining their competitive structure in a globalizing market structure. In addition, innovation capability is considered an important element in the process of underdeveloped economies catching up with developed economies since it constitutes an important aspect of economic success. In the learning process, new information is produced, and this information is used to develop new innovative ideas. Knowledge is also an important resource in any economy. The learning economy concept; develops a theoretical economics perspective with a focus on explaining and understanding the process of

change in technology, skills, preferences, and institutions. A learning economy is an economy that includes the ability to learn, which is important for the performance of individuals, firms, regions, and national economies. In this context, learning is not only about access to information, but also about building new knowledge, competence, and skills. It is argued that developing countries are highly affected by the learning economy and they need learning and competence building in their development stages (Kitanovic, 2005: 14).

Nonaka and Takeuchi (1995) and Lundvall and Borras (1999) emphasized that the process of knowledge production and use requires dynamic interaction. In addition to a strong interaction between people in organizations, the transformation of implicit and coded forms of knowledge is very important in the process of producing and using knowledge. Thus, these information processes have been increasingly used in various innovation systems (at national, regional, and international levels) and network structures (As cited in Asheim and Gertler, 2005: 294-295). To understand the role of learning in economics, it is necessary to distinguish between different types of knowledge. In this respect, it is useful to classify knowledge by making a distinction between know-how, know-who, know-what, and know-why.

**Know-How:** It is defined as the ability to perform a job and the ability to organize resources to achieve targeted outputs. Know-how accumulation is provided by the experience gained while doing a job in person.

**Know-why:** Know-why, which is defined as explanatory scientific knowledge about principles such as the laws of nature, basically emerges as a product of humankind's effort to understand nature and society. The learning process by working plays an important role in the production of this type of knowledge. Learning by working; includes controlled experiments and simulations developed to understand the theory and principles underlying the operation of a technological system.

**Know-What:** It is a type of knowledge created by using learning. Since Know what is created because of the interaction between producers and users, this information is instead of any of the producers or consumers; arises in the relationship between the seller and the buyer.

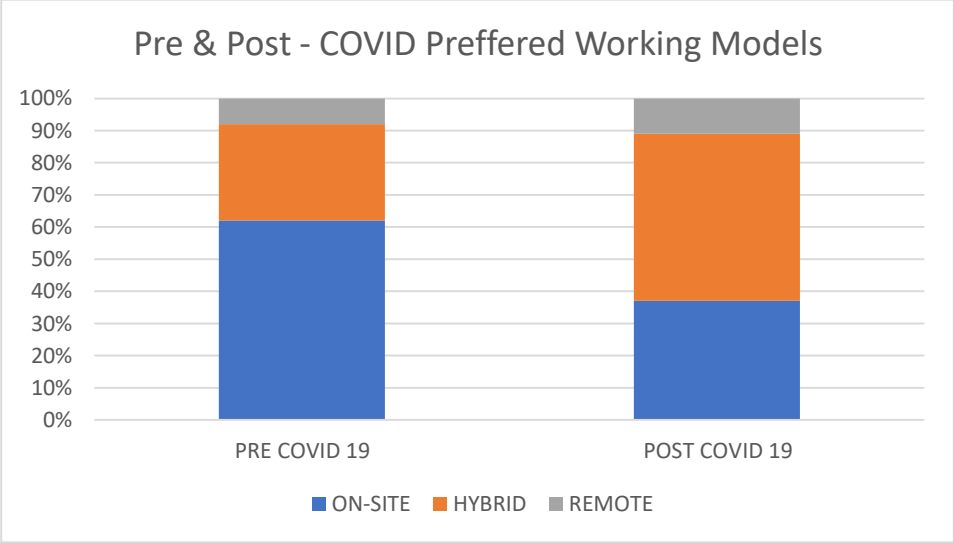
**Know-Who:** It is defined as a type of social information about who knows what (who knows what) and who knows how to do what (who knows how to do what), where information can be found, and certain social relations within the organization (Akgün et al., 2009: 25). -27).

Knowledge can also be categorized as tacit and coded knowledge. The encoded information can be transferred globally, and very little is lost in this transfer movement. The encoded information is expressed

in a globally shared code. In general, the encoded information cannot be patented and converted into intellectual property. This type of knowledge is effective in learning but is not economically viable. On the other hand, since tacit or firm-specific knowledge is hidden in the capabilities of an individual or organization, it is difficult to transfer this knowledge through formal education or information systems. This type of information represents a firm-specific competitive advantage. For developing countries, tacit knowledge and therefore know-how and know-how are used to achieve economic success. Know-what and know-why can be easily codified, transferred, and compared with information. Know-how and know-who are primarily rooted in practical experience and social interaction. Transition economies focus on the development of a national innovation system whose most important elements are knowledge and learning. Know-how and know-who are the two most important types of knowledge for a transit country (Kitanovic, 2005:18).

Lundvall touched upon the role of learning in new and competitive national innovation systems. Learning has been considered a very important element in innovation system approaches since it is the dynamic of the innovation system and has the feature of connecting production and innovation in a NIS (Cited by Archibugi and Howells, 1998: 8).

### 1.5. Covid-19 Crises and E-Commerce:




Graph 1.5. McKinsey & Company June 14, 2021

According to recent data from U.S. News, 44% of remote employees would like to keep working from home, while 52%—a significant rise of 22% from before the pandemic—said they prefer a hybrid strategy. It's interesting to note that this change may also be advantageous to businesses: "A hybrid model can help firms make the most of talent wherever it is located. Additionally, it can increase organizational performance while reducing expenditures. It's crucial to be clear about what "work-life balance" implies because the phrase is so frequently used. Anna Cox, a professor of human-computer interaction at UCL, defines it as "feeling in charge of how you balance the varied demands of all elements of life to promote wellbeing and avoid disease." It ought to involve fulfillment, joy, and job satisfaction. It becomes obvious that just because we can be connected all the time, doesn't mean that we should be, given how many workers feel overworked and stressed out. It's crucial to note that Cox continues, "Policymakers need to take tangible action to defend workers' rights to shut off." But we also need to talk about how the business can foster a culture that values the welfare of its workers. (McKinsey June 14:21)

Clarifying policies for remote working is a crucial first step, which a startling 60% of businesses have not yet done. Before the epidemic, a commonly repeated myth indicated that distant labor causes productivity to decline. It's interesting to note, though, that recent data points to the opposite being true. The Conversation states that "successful working from home requires more work.

Due to the quarantine and isolation of countries, user activity in online shopping applications has increased around the world. E-commerce has recorded a steady increase in new and active users since the first week of March 2020. In addition, the COVID-19 outbreak significantly changes consumer behavior

and reshapes the industry. Due to the safeguards adopted and client preferences, physical businesses are badly impacted by the epidemic, whilst online merchants continue to attract customers by growing their sales volume. When the periods before and after the COVID-19 pandemic crisis are compared, changes have occurred in terms of consumer demands in the context of products and product groups in the world. For example, travel and accommodation expenditures and the clothing product group, which had a high e-commerce volume in the pre-COVID-19 epidemic period, decreased due to the measures taken during the epidemic.

### 1.6. E-commerce impacts on Work-life Balance:

With the transition to the new economy, the internet and electronic commerce applications, which have led to an important evolution in the field of work as well as in the economic field, are primarily based on brain power rather than manual power. The products and services produced in the new economy, which is a product of the Information Society, which brings knowledge to the forefront in every process, have entered all processes in our daily life, including our working life. Changes expressed in "years" in the Industrial Society are now expressed in "months and days" in the new economy. Changes that emerged very quickly destroyed the concept of space in economic life and increased the importance of the concept of time. With the new technological developments, the production method has also changed, and the production model based on mass production has been replaced by a customer-oriented flexible production method for a quarter of a century. The basis of the new production model is to produce every good and service of higher quality, cheaper, and in a wide variety to ensure customer satisfaction. (Daniel Franklin, 2017) Now, to compete in the new economy and exist in the markets, internet and electronic commerce projects, which are products of information processing and communication technologies, are implemented by small or international companies as part of their strategies. New competition conditions, new management, and production techniques, and new organizations have become the necessity of rapid and stable change. Companies have had to go through radical changes in many areas, from archiving to technical services, from accounting to sales and marketing, with the opportunities offered by the internet.

In a globally competitive environment, being fast provides a great advantage. Thanks to the Internet and electronic commerce applications, users can access the information they want from the environment they are in every day and at any time of the day. Today, the importance of space and distance has decreased, and information has become very valuable. Products and services have gained value thanks to information and information communication. Changing business rules forces every business to engage in an informatics

activity, to learn new business and business rules changed by technology, and to transform electronic commerce.

### 1.6.1. Impact on Workplace Structure and Business Organization

Evaluating the effects of e-business based solely on the volume of e-commerce transactions may fail to recognize the true importance of e-commerce. In the future, electronic commerce between businesses and consumers (B2C) and between businesses and businesses (B2B) will be considered elements of an overall electronic commerce strategy. Thus, electronic commerce will be considered a normal business process that is increasingly supported by digital information and communication technologies and carried out over electronic networks. (Daniel Franklin, 2017)

The reflections of electronic commerce on business life, in general, are briefly listed below:

i. Geographical distances have become insignificant thanks to the internet,
ii. The market expanded; regions have been replaced by a global market,
iii. Sales, production, and marketing can be done anywhere independent of the location,
iv. Global competition has intensified, and the definitions of competitors have changed,
v. Customers' expectations and behaviors have changed.

Electronic commerce has eliminated the distance between the producer and the consumer. Both segments can make their sales and purchases without the need for any broker, retailer, wholesaler, or even distributor. Although new intermediaries are needed (network access providers, electronic payment systems, and transaction certification and control services), they are less labor-intensive than traditional ones and do not need to be deployed in a particular part of the world.

### 1.6.2. Changes in Workplace Structure:

Rapid developments in the field of computers and communication not only facilitate all kinds of information flow but also increase efficiency and productivity with the great advantages it provides in the use of space in the workplace. With the emergence and development of new technologies in very short periods, workplaces also take advantage of these changes to update the systems they use. In the workplace, with the development of information processing and communication technologies, the usage rates of the internet and computers are increasing. Therefore, every technological development causes a new change in the workplace. Companies, especially workplaces, that have started the transition to electronic commerce applications are also changing over time. As a result of electronic commerce applications, the structure of

the workplace, and the concepts of worker and employer will change and the physical environments used will be reduced in terms of space such as remote systems and even no need for a place to work.

The workplace is no longer the place where the work is done for the employees, it either changes shape and takes on a different structure, or it is in a position where every point can be used whenever desired without using a certain environment. Since the connection between the departments in the workplace can be through the communication network, there will be no need for all units to be in a center close to each other. With electronic commerce applications, sales can easily be in one region, accounting in another region, and warehouse and shipment in a different region. Thanks to e-commerce, distances between departments, even intercontinental distances, will not prevent the system from being disrupted. Although some of the sales of many electronic commerce companies in the USA are in the USA, their accounting departments are in India, while their warehouses and shipments are in Europe and Asia.

The workplace ceases to be the center of work for most employees. As a result of the flexibility provided by electronic commerce applications, the concept of the workplace, which is the place where the work is done, not be used for a certain place. If the employees deem it necessary, they will be able to provide both software and hardware support from remote points. Employees of all departments (except those with physical product contact) be able to do their jobs without going to the workplace by managing the e-commerce program from anywhere with internet access. Electronic commerce not only reduces buyers' handicaps due to geographical distance but also reduces barriers to entry. There is no longer a need to set up physical environments to sell in different areas. Thanks to virtual workplaces and communication points on the Internet, proximity to production areas and direct distribution to consumers will be provided. Although the establishment of virtual workplaces does not require much expense, highly complex electronic commerce virtual environments require serious investments.

The biggest difference between the organizational structure of the virtual business and the classical business organizational structure is that the hierarchy has disappeared completely or to a large extent. In virtual businesses, which are complex structures, there will be no chain of command, subordinate-superior relationship, or hierarchy that makes such a structure functional since it does not have an institutional nature. Employees in virtual organizations spend a significant part of their time in the computer environment. However, this does not mean that the work is done alone. Since the communication between individuals and groups can be very intense and comfortable, each employee can also work with another group or person jointly.

The spread of information technologies (IT) and the development of electronic commerce have affected the practices of businesses. It has forced them to create operational effects as well as adapt to flexible organizations. Small companies in universal and multinational competition are increasing their application areas. This has impacted the market thanks to increased competition, universal transition and organizational change, and the need for employment, wages, and expertise.

## 2. RESEARCH METHODOLOGY

## ANALYSIS OF E-COMMERCE IMPACT ON WORK-LIFE BALANCE

This chapter describes the actions done to accomplish the study's objectives, which will be emphasized and addressed. This contains the method utilized to collect respondents for this study, their demographics, and the sample strategies applied. The researcher will also define and discuss the research design process, data collection method, research tools employed, and data analysis process applied in order to reach the target goals and objectives for this study. The arrangement of the chapter's subtopics was inspired by these keywords.

The best technique to comprehend the more in-depth aspects of the research topics is to employ both closed-ended and open-ended questions in this study to collect both quantitative and qualitative data. It offers objectivity and correctness, is more economical, and is simpler to disseminate and compile.

As stated in the first chapter of this study, the objectives of this study are to determine the importance of the impacts of e-commerce on Work-life Balance and to evaluate the importance and impacts of e-commerce for employees.

The goals serve as a guide for creating and designing survey questions that will collect the needed answer data to meet these goals.

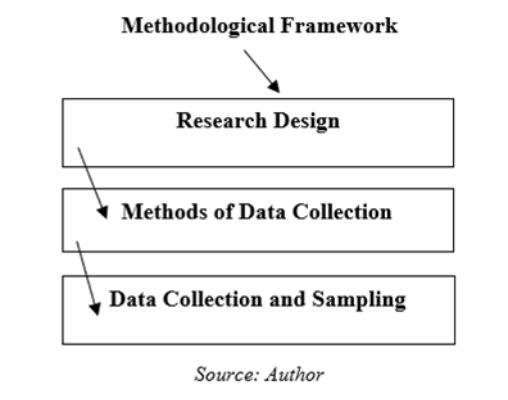



Figure 2.1. Author

Historical findings were reviewed and compared with the newish marketplace supporting Survey findings, with this respect, analyzing this paper will help for a deeper understanding of all the processes for the economic changes in the historical line (Figure 2.1.).

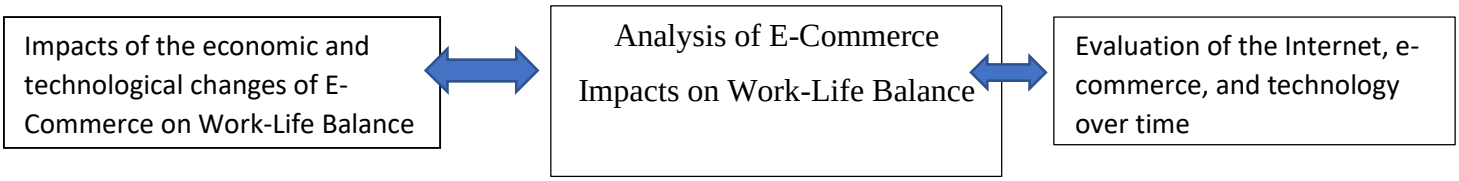



Figure 2.2. Author

## 2.1. RESEARCH PARTICIPANT

About 100 respondents will get structured questionnaires with predetermined response options from multiple-choice questions, and 5 employees will be interviewed.

The participants were chosen from employees from different companies to reflect the main aim of the research paper. This also provides valid and reliable responses to the questionnaire which allow the employees to explain the e-commerce impacts.

## 2.2. Sample size

The researcher has concluded that this is the total number of respondents who took part in the study. 100 respondents were found and issued survey questionnaires via Instagram's "Pool" area to meet the study's objectives. Their choice may be influenced by various backgrounds and availability. This was the best number to obtain, considering both time and resource constraints.

## 2.2. Sampling techniques

About 100 respondents will get structured questionnaires with multiple-choice questions and preset response alternatives. To conclude the thesis work, statistical tests will be performed to calculate and assess the frequency count and mean scores of the respondents to the questionnaire items.

The primary sampling method used to omit people from the population is probability sampling, which chooses respondents at random. This approach was selected since the target population was so large.

Simply put, probability sampling is a sampling approach in which a researcher uses statistical theory to choose samples from a larger population and then claims that, on average, their findings will reflect the general population. Every member of the population has an equal probability of getting chosen using this sampling technique. This approach offers the best chance of getting a sample that accurately represents the total population.

**Types of Probability Sampling:**

i. Simple Random Sampling:

ii. Random Cluster Sampling

iii. Stratified Random Sampling

iv. Systematic Sampling

**Advantages of Probability sampling:**

i. It is cheap to execute

ii. It is the best presentation of the entire population.

iii. It is simple and straightforward.

**Why this sampling technique should be used:**

In order to create an accurate sample from the population and when appropriate, decrease sampling bias, this sampling strategy is typically utilized when the population is significantly diverse.

**2.4. Location of study**

Most of the study location is Europe but also there are some people who attended the ‘Survey’ from the UK, USA, and Turkey so which helps to understand if the location is different, the impacts can be different or not. For the purposes of this study, the responses obtained from the data were analyzed and evaluated. This has an impact on the project's findings, suggestions, and conclusions. The questionnaire was sent to respondents through social media which provides to reach many people from different countries and backgrounds.

**2.5. Research ethical consideration**

Prior to the dissemination of the questionnaire, the respondents were made aware of the study's goals and their agreement was requested. They were assured complete anonymity, confidentiality, and data security, as well as the knowledge that the information obtained from this study was solely for academic purposes and was not supported by governmental or commercial institutions.

## 2.6. Research design

This refers to the procedures and tactics the researcher outlined and used to accomplish the study's objectives. This also refers to the structure and rules established to produce research findings that are unbiased, valid, and applicable to most people.

A questionnaire was utilized during the investigation. A Likert-style survey was utilized in conjunction with multiple-choice questions to gather quantitative data from 100 respondents. Also, for deeper understanding, 5 people were chosen from the workplace to ask open-ended questions.

Statistical data analysis is made simple and possible by using this strategy. Compared to other methods of data gathering, the questions are simple, and as a result, the answers are trustworthy.

Online surveys with closed-ended questions were used to collect quantitative information and obtain a sense of the overall experience of employees to discover what effects e-commerce had on workers. A similar strategy of data gathering, and research tools was utilized to access the effects of e-commerce. This suggests that the effectiveness of online surveys and closed-ended questions in gathering pertinent data for research is generally acknowledged.

English was used to convey the questions. It asks about things like age, gender, and occupation that are connected to demographics. The Instagram "pool" area was used to generate a survey with 10 questions and a Likert scale option that asked respondents to rate the importance of each item on a scale from Very Unimportant to Very Important. People from several nations were given access to the survey online.

In this study, quantitative research methods were used to carry out the intended objectives. Online surveys and polls were used to collect quantitative data from the target group. Open-ended questions were asked to 5 people as explained above and it created qualitative data and a deeper understanding.

This research instrument was used to get responses from the respondents since it was a quantitative study, and the questions were well-structured and closed-ended to collect data that could be used for quantitative analysis.

For thorough validation of the quantitative research, information obtained from articles, the internet, and e-libraries of educational institutions was employed as a secondary data source.

## 2.7. Data collection

This is the procedure for obtaining important data about the subject of interest from the respondents. The objective is to acquire high-quality data that serves as a foundation for precise data analysis.

100 respondents received the questionnaire online via social media outlets. In this regard, 100 respondents provided insightful comments that were used to compile the findings. This approach was chosen because it uses fewer resources and responds more quickly than other processes. Additionally, it allows the researcher to examine a wider geographic range.

**2.8. Research instrument**

This is the method the researcher used to collect information from each responder, which would then be analyzed. The type of data to be collected dictated the construction of the study instrument. To guarantee that different experiences are considered, this study uses quantitative data that is based on standardized, closed-ended questionnaires and simple random population sampling. The collecting of quantitative data makes it simple to understand more about the respondents, the data is more objective, and the analysis is much simpler. The respondent has a variety of options to choose from while answering these closed-ended questions. With open-ended questions, detailed answers have gotten from the employees and helped to see insights into the study and explore more.

Closed-ended questions are those in which the respondents must choose one of several predefined answers, such as multiple-choice such as straightforward yes/no questions, as their answer. To get quantifiable data, this is necessary. Because they are simple to grasp and allow respondents to provide clear answers, these questions are ideal for quantitative research. Because the data are quantifiable, data analysis is made simpler.

Open-ended questions which are interviews gave the respondents free explain impacts and qualitative data collected.

Three structured questions make up the first part of the questionnaire and are used to collect respondents' sociodemographic information. Basic information is requested in this section, including gender, age range, and employment.

The purpose of the second segment was to gauge how frequently respondents used the internet and e-commerce, the two primary sources of the term "electronic," among themselves. The question of whether respondents had interacted with modern technologies and e-commerce was put to the respondents.

The final portion examined the respondents' level of familiarity with e-commerce as well as its consequences and repercussions. To ascertain the most typical use cases of the consequences of e-commerce on respondents, it also provides a list of possible favors to the respondents.

The fourth component tries to identify any negative effects people experienced from using e-commerce at work.

The structure of the final section makes it easy to access ideas regarding the new economy and how internet usage affects e-commerce. In order to gauge whether or not the respondents' overall experience with the impacts was significant, a Likert scale was also provided to them.

**2.9. Data analysis**

This is referring to how the data obtained from the respondents were analyzed. The method of data analysis in this study is influenced by the kind of data that was collected. Data analysis can be defined as the processing of data analysis to better understand the results and derive correlations and conclusions that make sense from them.

On the questions, descriptive statistics were obtained. The frequency distribution and mean scores for the responses are included in these data. The researcher will then go on to clean and validate the results to ensure accuracy and completeness after compiling the data obtained from respondents. The researcher will then perform statistical tests to extract the mean, standard deviation, and other important statistics before using quantitative methods of data analysis. The data will be collected online and analyzed using EVIEWS and STATA software.

# RESULTS AND ANALYSIS

# OF E-COMMERCE IMPACTS ON WORK-LIFE BALANCE

The objective of this part is to assess the study's empirical findings. The purpose of this study is to determine the impacts of e-commerce on Work-life and to evaluate the effects of E-commerce on employees' working life and changes. This directs the development of the research tool and the analysis of the information gathered from respondents.

The following research questions, which are listed in the introduction chapter, will direct the design and analysis of this study:

- **i.** What is the E-commerce impact on Work-Life Balance?
- **ii.** What kind of E-Commerce developments affect Work-Life Balance?
- **iii.** How has E-Commerce affected the Work-life of employees?
- **iv.** What are the impacts of E-Commerce on Workplace Structure and Business Organization?

The evaluation, presentation, and discussion of the study's conclusions and data will take place in this chapter.

## 3.1. RESPONSE RATE TO SURVEY

Questions were asked through Instagram to 100 people using the 'Pool' section. They all responded to the questionnaire and finished the survey. This is equivalent to a response rate of 100%.

## 3.2. DEMOGRAPHIC PROFILE OF THE RESPONDENTS

100 person received a questionnaire, and 100 of them decided to take part in the survey. Since this age range is the most engaged in the workforce, the respondents were chosen from the general population between the ages of 20 and 45.

Because responses can vary, people were selected from a variety of backgrounds (e.g., countries, ages, genders, and working environments). However, in this case, the answers were surprisingly similar, demonstrating that everyone agrees that e-commerce has an important place for everyone around the world.

The first section's questions were designed to gather information about the participants' demographics. In the first question, respondents were questioned about their gender; in the second, they

were asked about the age group they associated with; and in the third, they were asked about their occupation. 58 males and 42 females took the survey and responded.

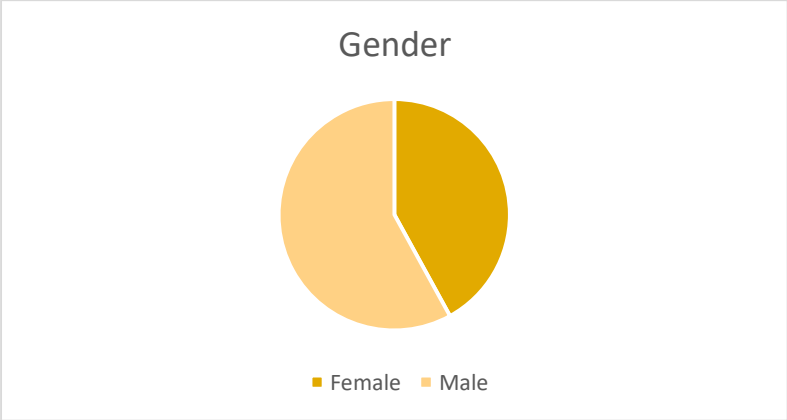



Figure 3.1. Gender Distribution among Participants

Most of the respondents numbering about %72 were young adults between the ages of 25 and 35. This is followed by respondents from 25 and below with %20.

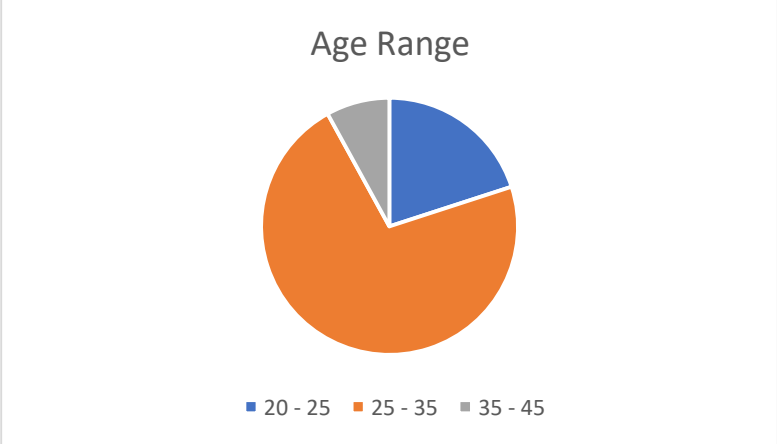
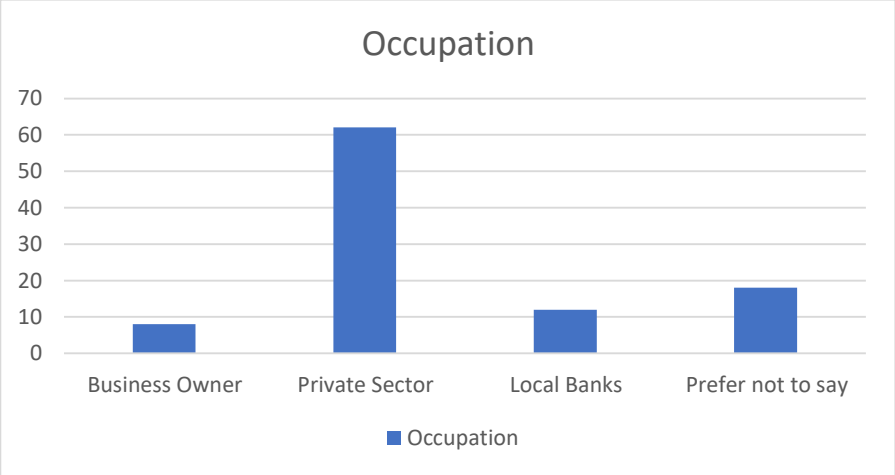



Figure 3.2. Age Distribution among respondents

Respondents were asked about their occupation, 62% of respondents claimed that they are working in the private sector, 8% were business owners, %12 were working in local banks, and 18 % preferred not to disclose their occupation.




Graph 3.1. Occupation of Respondents

| **Independent Variable** | **Frequency** | **Percentage (%)** |
|---|---|---|
| **Gender** | | |
| Male | 58 | 58 |
| Female | 42 | 42 |
| Prefer not to say | 0 | 0 |
| **Age** | | |
| 20 - 25 | 20 | 20 |
| 25-35 | 72 | 72 |
| 35-45 | 8 | 8 |
| **Occupation** | | |
| Business owner | 8 | 8 |
| Private Sector | 62 | 62 |
| Local Banks | 12 | 12 |
| Prefer not to say | 18 | 18 |

Table 3.1. Demographic Profile of respondents

### 3.3. RESULT PRESENTATION

Respondents were questioned about their usage of e-commerce services, and internet usage, including their frequency of use and their reasons for doing so.

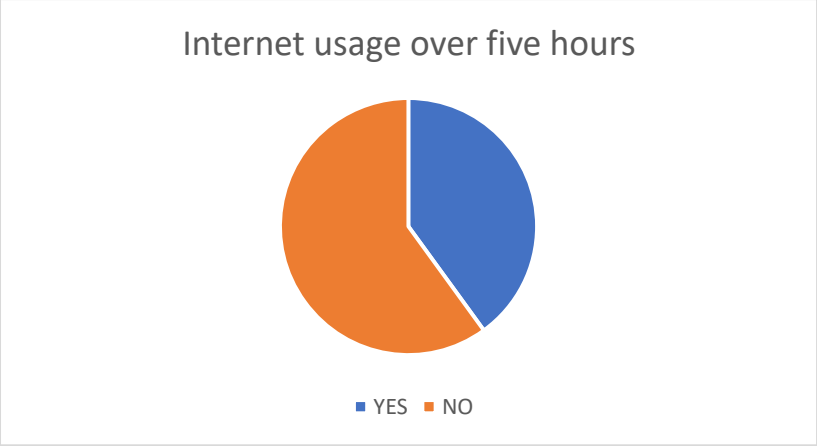



Figure 3.4. Chart Representing Respondents who use the internet over five hours

The time spending the internet is over 5 hours for %40 which shows us almost half of the people spend 5 or more hours using the internet during the day.


Figure 3.5. Chart Representing Respondents who do online shopping

Shopping through the internet rate is quite high, and online shopping is also a frequent thing for over %70, preference shopping through the internet is over %90, this means that people generally prefer to buy products through the internet, for some of them it is much easier, and they can compare the prices with the other stores easily without spending time to checking each store in person.


Figure 3.6. Chart Representing Respondents who know E-commerce

Asked if people know e-business and e-commerce, the results were almost %80, which shows us, most of them follow the new economic systems and know also almost %90 of attendants think to run a business, because, with the changes in technology, it is easier to run a business than the past. Knowledge is reachable, and changes in technology bring a clear vision for people.

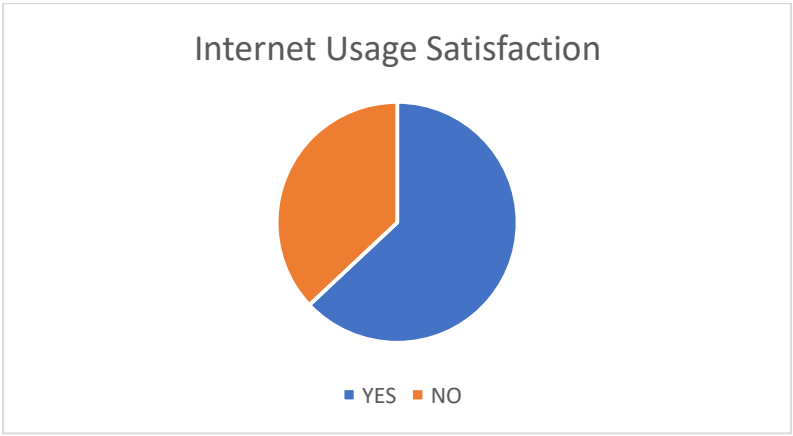



Figure 3.7. Chart Representing Respondents who satisfy usage of internet

Meanwhile, the satisfaction rate is a little less, it is almost %60, after all this development that we discussed in the results section, people still think that it should be improved especially because of the lack of security systems also in some countries it is still slow.

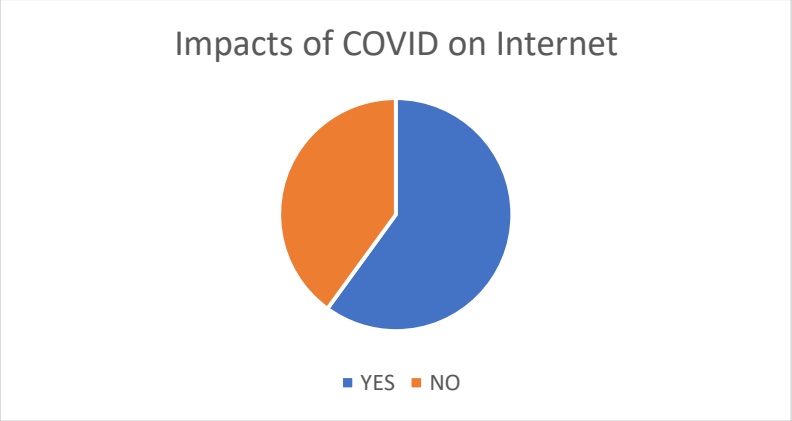



Figure 3.8. Chart Representing Respondents who think Covid affected internet usage

The impact of COVID is %60 for internet usage has not had many changes because people were already involved with the technology, but it is also increased usage of the internet after COVID. As in everything else, an extraordinary activity has started in e-commerce or online shopping. People have increased the volume of the products they started to buy during the quarantine period, as they increased in this panic. People have started to send to their addresses by shopping online instead of their parents or relatives who do not know how to shop online or cannot use e-commerce. While spending time at home, video sites have become more popular. All these reasons have activated businesses and increased their e-commerce applications by differentiating them. Even if local markets do not set up a website, Instagram, etc. They started to take orders via social media or by sharing their phone numbers on social media, and they made a quick transition to online shopping.


Figure 3.9. Chart Representing Respondents who think working remotely better

Around %86 of people think that it is better to work from home/remotely which is better to save some time and not spend hours in traffic to go to the office or even to move to another country which means that they feel more comfortable while working from home, no need to find a job in the country that they live but also from different countries.

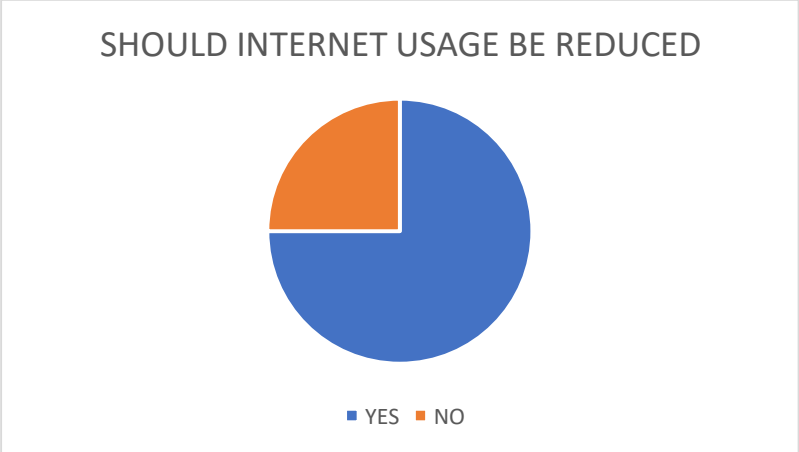



Figure 3.10. Chart Representing Respondents who think internet usage should be reduced

Finally, around %75 of people still think that it is too much to spend time on the internet and we should reduce internet usage. It is almost impossible while most companies involved in the new technological system and build their companies on it.

**Results of Open-ended Questions/Interview:**

During the interviews, open questions were asked to employees the interview took place in the company, which is a banking organization, and questions were asked of 5 people from different countries, ages, and statuses to get proper results, see how environment and culture could be effective on Work-life Balance with changes in e-commerce.

When all the answers were gathered we reached the one common answer which is that e-commerce made things easier in work-life for changes on the internet and economy how to affect their work-life balance.

Changes on the internet and economy how affect your work-life balance?

According to the five interviewees, they agreed that the changes in the economy, and the internet helped them to work more conveniently way and reduces the workload and time during working hours. For some tasks which are required manual application changed to an automatic way. Interviewees first and third, working at the bank, employees used to apply for some payments manually, but now, with the new payments system, payments automatically send to the destination with specific information.

What do you think about the new economic systems?

The new economic system made a huge impact on their lives, with the changing and developing of new payment systems and technology, business life and normal life order started to get easier. Even when families are at work, they can receive notifications on their phones from what their children have ordered to what they are doing. With the development of communication systems in the workplace, it takes only 10 seconds to contact the center at the other end of the world. Even if some systems still have points that they think need to be improved, such as security, in general, business life has become much easier with these developments.

What kind of changes in technology helped you to work better and easier?

While two interviewees (first and third) -working at the bank- stated that they are very happy with the arrival of the new payment systems and their workload has decreased, the person working in the IT department -second stated that these systems are much more understandable than in the past and that they can activate everything easily and without spending as much time as before with new and fast machines. The interviewee -fourth, and fifth- stated that with the ease of communication with other countries, there is no longer any need for travel, and he continues the conversations online or by phone. He also emphasized that it brings an enormous change and favor in terms of time, personal space, and money wise.

Does e-commerce make things easier for you at working place?

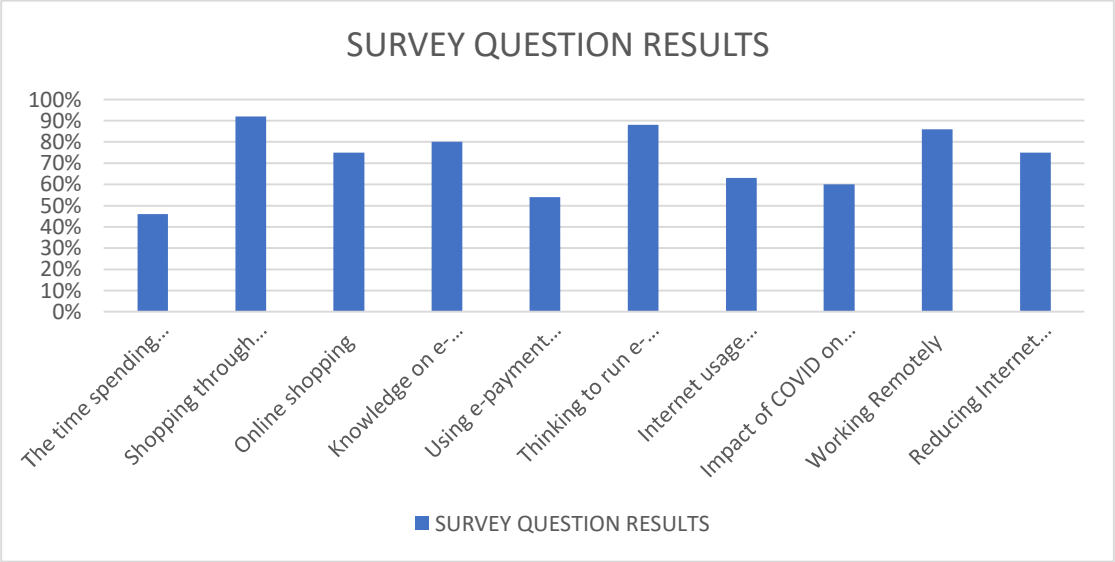
Although they stated that it is easier in some ways to communicate with customers one-to-one, they stated that nowadays no one prefers this method anymore. With the new technology systems and developments in e-commerce, the diversification and acceleration of the systems offered to customers increased customer satisfaction and reduced the workload. With the increase in customer satisfaction, employees started to encounter fewer problems. The chance to work from home without coming to the office even when sick, or to continue working even from another country was a great convenience. Especially, with changes in payment methods such as internet banking, customers can do everything with a tap, they can even reach employees which are working at the bank -like me- they can contact us easily can ask for a refund or confirmation in seconds and we can process theirs requires.

Do you prefer new technological systems or traditional ways?

All interviewees agreed to new technological systems, traditional ways were not good enough to process the work during the day, and even after working hours, people can continue to buy-sell products. On the other hand, the partnerships, and investments of multinational companies in developing countries have contributed positively to both economic stability and employment growth. In companies that exist in the electronic commerce environment, there is no obstacle for employees to gather around a project simultaneously. Geographical distances are no longer considered, thanks to the internet and electronic commerce applications.

To sum up, the term new economy has made important changes in the structure, rules, and functions of the economy in terms of quality and quantity in the last 15 years. The new economy is information, it is a knowledge-based economy that is used to create higher living standards and employment by incorporating new ideas and technologies in goods and services. In this study, the concept of electronic commerce is defined and the types, advantages, and disadvantages of electronic commerce and its effects on current and business life are examined. The digital revolution, especially the mobile internet, is radically changing the business world and working-life Balance. In the face of this new technological change, labor unions, which want to continue their existence effectively, adapt their mission and vision to changing conditions.

**Summary of impacts of E-commerce on Work-life Balance:**




Graph 3.2. Author -Conducted 'Pool' Survey-

The respondents were presented with a Likert scale to summarize their opinions on the impacts of E-commerce on their Work-Life

| **Variable** | **X** | **Frequency (n)** | **Percentage** |
|---|---|---|---|
| Very Unimportant | 1 | 2 | 2 |
| Unimportant | 2 | 6 | 6 |
| Neutral | 3 | 6 | 6 |
| Important | 4 | 44 | 44 |
| Very Important | 5 | 42 | 42 |

Table 3.2. Importance of E-commerce in Work-Life for Employees

**Mean and Standard Deviation Analysis of customer experience**

To determine the mean and standard deviation of the dataset, a descriptive statistical analysis method was used. According to Table 3.2. analysis of the mean and standard deviation for this section of the questionnaire indicates a mean factor of Figure 3.11. The fact that the mean score is above the neutral to the positive range suggests that the research participants have generally had important experiences when determining the impacts of e-commerce.

$$\mu = \frac{\sum \quad Fx}{N}$$

$$\mu = (\Sigma \text{ Xi}) / \text{N}$$

Figure 3.11. The formula for Calculation of the Mean

Here:

$\sigma$ = population standard deviation

$N$ = the size of the population

$x$ = each value from the population

The standard deviation for customer experience in Figure 3.12. which indicates that there was very little variation in the responses the participants gave to these questions.

$$\sigma = \sqrt{\frac{\sum \quad \left(x_{i} - \mu\right)^2}{N}}$$

Figure 3.12. The formula for the Calculation of Standard Deviation

Here:

$\sigma$ = population standard deviation

$N$ = the size of the population

$x$ = each value from the population

$\mu$ = the population mean

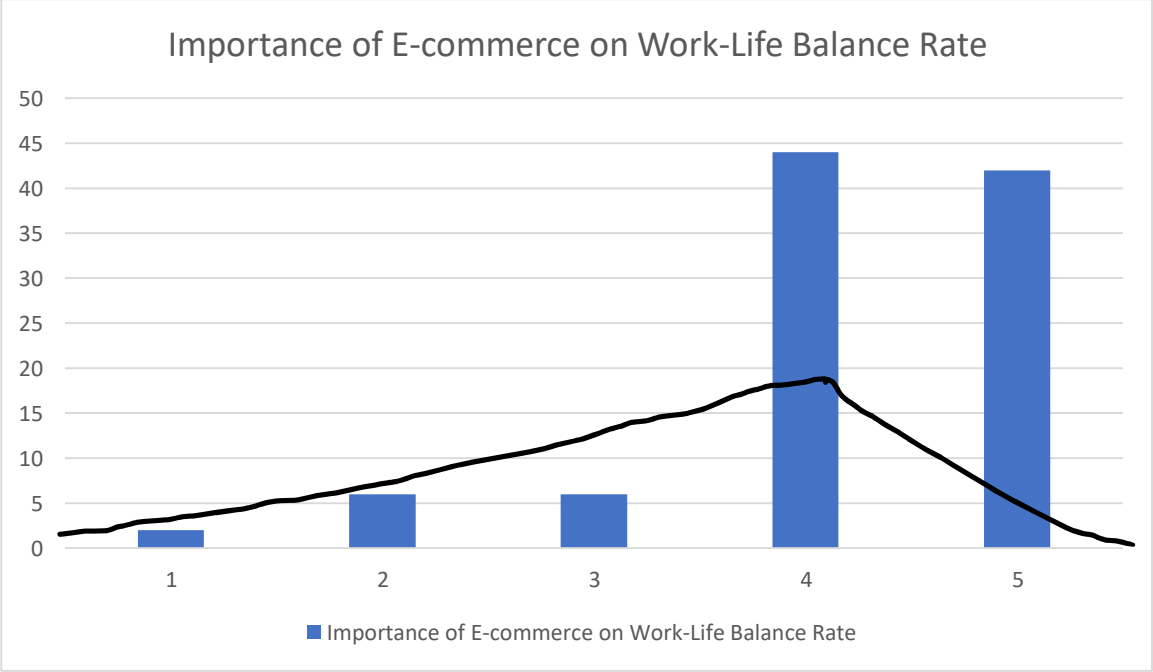
| **Statistics** | **Value** |
|---|---|
| Mean | 4.18 |
| Standard Deviation | 5.03 |
| Variance | 20.3 |

| | |
|---|---|
| Kurtosis | -2.93 |
| Skewness | 0.65 |

Table 3.3. Rate of the importance of E-commerce on Work-Life Balance

The mean is 4.18 and the standard deviation is 5.03 in the graph above. Additionally, the kurtosis value is negative, indicating that the data have a significant degree of volatility and a low frequency of values at the extreme ends. Also, skewness shows us how symmetric or asymmetric of data is, it is 0.65, which means that it is 'Left Skew' and the left side is represent low variables.

**Analysis of E-commerce Importance on Work-Life Balance**




Graph 3.3. Histogram of Respondent's Importance of e-commerce impact

The above chart describes the distribution of responses gotten from respondents with the most common answer being 4 which represents it is important.

The response to this section of the question is mostly on the right side. This shows that employees significantly think that e-commerce is important and affect their work-life balance positively but there are

still things that need to develop. Overall, the results show us how important e-commerce is in their Work-life balance in the new economy and new sectors.

### 3.4. RESULTS DISCUSSION

#### Research Questions

The first, seventh, and eighth research questions were targeted at understanding the roles of the internet and the usage of the internet played in employees' work-life for satisfaction and fulfillment also the first question of the open-ended questionnaire has also the same target and understanding of the importance of the internet in their work-life. When we look at the results from Figure 3.4. it is obvious that almost %50 of employees use the internet for more than 5 hours during the day.

With the development of the internet e-commerce industry had a major shift and it affected the whole economy and the employees mostly in a positive way as we discussed in the previous pages detailed.

The Second and third questions were asked to determine the preference and frequency of Online shopping for employees. The majority of the respondents chose online shopping which is an easier way for them and time-consuming. Also, it gives chance to compare prices and review everything easily.

The second and third questions of the open-ended questionnaire also related to the new economic system which developed and changed with the new technologies. The main aim was to understand, what these huge changes bring to their work-life balance and what kind of advantages or disadvantages.

The fourth question was asked to employees to see if they are aware of the definition of e-commerce and know the differences between e-commerce and e-business which they can answer the questions fully aware of the situation. The answer was quite high as indicated in Figure 3.4. with %80 of them aware of e-commerce and e-business. %88 of respondents also have a thought to run a business which brings us to the fourth question open-ended question, most respondents agreed on having the idea to run a business, they think that it is easier to run a business with the new technological ways and changes in e-commerce.

Also, %86 of the respondents think that it is better to work from home and remotely so they can run a business from a different location also find employees or jobs for themselves or sell products online without even having a physical shop.

All these answers that are taken from respondents given the results:

i. The new technology and internet usage make their lives easier and create an environment in which they can do their work earlier and easier.

ii. E-commerce impacts their work-life balance positively.
iii. The new ways to contact the customers and reach to products easily make a huge change and comfort.

The reflection of technological developments on the economy in electronic commerce applications also brings innovations in terms of commercial relations. Therefore, the development of electronic commerce will inevitably affect economic and social life in many ways. Working conditions, procedures in performing public duties, and changes in consumption patterns are just a few of the areas expected to be affected in parallel with the development of electronic commerce. The economic and social changes in question will not only affect the living conditions of different countries and regions but will gradually permeate the world's life through global interactions.

Other aspects which require change were:

i. Adopting the changes takes time and effort in the begging, and most of the employees suffered while engaging the new changes in the economy and definition of electronic rather than commerce but e-commerce.

ii. Presenting new ways to the customers, cooperating with them, also dealing with security problems.

iii. Giving training to the employees and needing new roles, and departments in the company which should engage with the new systems and develops.

The process that emerges in internet and electronic commerce applications also manifests itself in the change of sectors and the formation of new ones. First, change will be inevitable in sectors where information is used intensively. Some sectors and professions will disappear partially or completely, while others will be able to adapt themselves to new developments.

### 3.5. CHAPTER SUMMARY

Descriptive statistics including frequencies means and standard deviation were used to analyze the responses after an overview of the chapter's processes and a description of the demographics of all 100 respondents. Understanding the effects of e-commerce on Work-Life Balance was the study's main goal.

After statistical research, results show that the importance of e-commerce is around 4.356 mean, which shows that it is almost very important for respondents. The results showed that there is no huge gap

between the respondents and mostly they are satisfied with these new changes and the working environment that e-commerce brings.

Although %37 of respondents still do not satisfied with the development of the internet, interviewees also think that it should be improved. The major change in e-commerce has brought a completely new breath to work-life, demonstrated by this study that we will encounter many different developments and new systems in the future. The development of the internet, which is the last revolution of humanity, will continue at a similar pace from now on, and the internet will become even more indispensable in all areas of life.

The studies and the figures revealed show that it increases its efficiency day by day, and when compared to classical commerce, the needle is moving towards electronic commerce. The difference that emerges here is primarily due to the widespread use of technological developments, the costs of accessing these innovations, and the fact that the improvement works on these issues are more effective in developed countries. Internet connection fees in Europe and many developed countries are lower than in less developed countries. Increasing connection speeds, lowering fees, and the suitability of technological products to income levels increase the use of the internet and therefore e-commerce. When the studies are examined, it is seen that the increase in the e-commerce volume has a positive effect on the economic growth of the countries. All elements that make up electronic commerce, especially technological innovations, are developing day by day. Likewise, trade is progressing at the pace of our age. The pioneers of this progress and development are the companies that produce and trade technology. International organizations and the relevant institutions and managers of the states should be guiding, guiding, and drawing the necessary framework for the issue to spread electronic commerce faster, increase its volume and move its benefits to higher levels. Any arrangements to be made regarding structural requirements, security problems and legal issues will contribute to the development and growth of electronic commerce.

In conclusion, with the new technology and the wide opportunities for new business systems life got easier, nobody needs to move to another country to work, and the labor force is becoming easy to find with a remote work system. There are still some places that are using the traditional ways but most of them shut down or decided to go with electronic systems and adapted to the new environment. The research results also showed that %81 people use the internet at least 5 hours during the day, but in the past, it was not included in our daily lives. A huge population is running the company even from their homes selling goods online such as candles, flowers, jewelers, cosmetics, etc.

# CONCLUSIONS AND RECOMMENDATIONS

With a brief conclusion based on the study's goals, research questions, and findings, this chapter wraps up the investigation. It will be discussed how important this research is in the context of how e-commerce affects work-life balance. At the conclusion of his chapter, suggestions for e-commerce, work-life balance, and additional research will be discussed.

## CONCLUSION

The purpose of this study was to examine and comprehend the effects of e-commerce on work-life balance as well as to comprehend employee perceptions and experiences, who served as the study's primary target population.

As indicated in this study's theoretical approach, digital transformation will not only be related to advanced technology and knowledge-intensive sectors but will also affect all organizations of economic life by spreading positive effects on many sectors of the economy from this perspective e-commerce brought plenty of benefits to the work-life such as:

i. The barrier between the producer and the consumer has been removed,

ii. Increased flexibility,

iii. Network access providers, electronic payment systems, and transaction certification and control services are examples of new intermediates that are required but are not geographically restricted and need less labor than conventional ones,

iv. Geographical distances have become insignificant,

v. Shortened time between work processes,

vi. Increased accessibility,

vii. Greater potential for work-life integration,

vii. Increased competition.

Additionally, employees mentioned the lack of opportunities such as training, adaptation, and digital sources. Not every employee has full knowledge of the new systems, and it can create some problems in developing countries. Also, there are still some companies that exist like such banks which do not have the new payments, or they are still trying to catch up with the new systems but while they are trying to catch up, it continues to improve each day. It was emphasized that developing countries should keep up with new

economic and technological developments. It was argued that there is still some lack of information about e-commerce and that this requires some training to be provided to the employees by closely following the technological developments.

It is hoped that this research will contribute to the use of e-commerce to make employees more active and effective in work-life, to follow the necessary developments, to provide training, and to improve the work-life balance.

It is very important for companies and governments to use e-commerce more effectively in work-life by closely following these developments and providing the necessary support to their employees and companies, as well as providing their employees with the important training and resources on these developments in private companies.

The findings from the research participants corroborate some of the ideas raised in the study's theoretical framework chapter and offer insightful solutions to user trends.

## RECOMMENDATIONS

This section contains the researcher's suggestions for e-commerce service providers and upcoming researchers.

### Recommendations for adopting changes in E-commerce

Internet and electronic commerce applications have a positive effect on meeting distant market points in developed and developing countries and ensuring mutual information exchange. However, advanced technology investments made by multinational companies to benefit from the low-cost workforce living in developing countries have led to the development of both human and technical infrastructure in these countries. Electronic commerce is a development that provides opportunities for more efficient use of resources in terms of macro and microeconomics in developing countries. Developing countries' use of these opportunities depends on the removal and promotion of legal and institutional barriers to electronic commerce. Developed countries are a few steps ahead of developing countries in electronic commerce and are trying to maintain their superiority. Therefore, a challenging process and race await developing countries in this regard, as in every other issue. Developing countries need to somehow develop their strategies for the developing and growing software sector, multimedia, and information technology (IT) services, and electronic commerce industries, both in the domestic market and in the global market. However, companies in these countries should also put forward strategies that will enable them to harmonize training and human

resources projects and policies simultaneously with the developments in the world to improve the skills of their employees.

The sooner developing countries start their preparations for electronic commerce, the more their earnings will increase at the same rate. Otherwise, the flow of world trade from developed countries to others will become more evident. Societies that have not been able to implement the necessary open network access infrastructure, and administrative and legal regulations soon, and cannot raise the quality and quantity of their manpower to the level that they can operate on the open network, will also lag in electronic commerce. Therefore, the economic and social losses of countries that cannot establish the necessary technical and administrative infrastructure, which seems costly at first, will be much higher than the initial cost. The flexible and open infrastructure offered on the Internet supports the growth of electronic commerce. Electronic system infrastructures like communication, television and data transmission have become widespread. The main purpose is to respond to the growing diversity of changing commercial demands in the international technical and regulatory field, with network facilities that are as standardized as possible and can communicate with each other. Electronic commerce will completely or partially change social life, state structure, the development of organizations, and all commercial systems. Indeed, when we look at the developments of the last decade, it is observed that there is no area where electronic commerce will not penetrate. In short, the letter "e" will be placed at the beginning of every field or profession, as seen at the beginning of some words in recent years. Electronic commerce not only changes commercial relations, but also changes the management and employees, and therefore the union understanding. Not the type of worker working in a certain place, but the types of workers who are flexible, specialized, able to use the information, and work independently, which do not have the concept of time and place.

Learning is considered an important and necessary input used in innovation processes. The discovery of a new and more efficient production method for the market and the discovery of new and more attractive products increases the competitiveness of the market. Learning that occurs in connection with the production process and because of interaction with users brings success in product and process innovation. Learning: In addition to shaping the know-how process necessary for problem-solving, it is also used to identify, define, and solve the said problems. The ability to learn from previous experiences and the process of using those experiences in problem-solving is also important. Learning produces changes and fosters innovation. The change caused by innovative actors puts pressure on other institutions to bring about more change. Pressures for change increase when a competitor introduces a more efficient process or produces a more attractive product. Consumers also must change their behavior when they encounter a new product. Change also involves learning. In this context, learning is a self-sustaining process (Ernst & Lundvall, 1997: 28-32).

Although there are deficiencies and delays in security, legal and regulatory issues, more and more people prefer electronic commerce due to the reasons such as speed, convenience, and price advantages. The fact that e-commerce cannot be carried out face to face, unlike traditional commerce, is an important point that creates distrust. More users will be able to meet with e-commerce by solving the known and experienced problems about security. In this direction, banks and companies that develop payment systems, especially information technology companies, should develop systems that users can trust more to establish the technical infrastructure that will solve the problem of trust. However, the security measures to be taken to ensure this should not cause users to have to deal with unnecessary and long processes. In addition to the efforts to eliminate the existing security and structural regulation deficiencies, technological innovations that will facilitate users' internet access should be realized.

**Recommendations for Further Research**

The fact that today's people are more intertwined with technology in many areas of life compared to the previous generation suggests that the number of conscious internet users will increase in the future and that the internet and therefore e-commerce will be used more effectively. However, the authorized bodies that are parties to e-commerce should create the necessary legal regulations to improve the processes of users to benefit from e-commerce and to encourage users in a sense. It seems that it will not be possible for e-commerce to replace classical commerce. For this to be possible, it is necessary to eliminate physical dependencies such as product delivery within the e-commerce process, which is not possible. Because, even if all other processes are carried out electronically, it will still not be possible to go beyond the methods used in classical trade for the delivery of physical products. At this point, logistics gains great importance for companies engaged in e-commerce, and successful applications that can be developed will provide positive feedback on e-commerce and will contribute constructively to its use. Because e-commerce is a global phenomenon, it is necessary to evaluate all kinds of works to be carried out in the future, like the studies carried out in the international arena, and to keep them in a general framework and standardize them. Studies to be carried out in this sense should be structured in a way that will create a common denominator for all nations, including recommendations and policies for underdeveloped countries, and reflect forward-looking projections.

As technology develops and changes, consumer habits and e-commerce will also shift. According to the Census Bureau, U.S. retail eCommerce sales for the fourth quarter of 2019 were anticipated to be $158.0 billion, up 2.6% from the third quarter. Expect that pattern to endure for many more years. The development of new types of screens is one instance of how technology will significantly influence the future of

eCommerce. Consumers will soon use wearables, kiosks, and better speech engagements to interact with eCommerce touchpoints. Additionally, e-commerce personalization will keep pushing the envelope. The ability for websites to "remember" their visitors and customize their eCommerce experiences is already a reality. This enhances more than just conversion rates and customer pleasure. Additionally, it generates game-changing data that businesses can employ to create even better user experiences for people visiting their websites.

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## SUMMARY

When analyzed in terms of economic effects, it has created an unpredictable chance of flexibility, entrepreneurship, and competition for small and medium-sized entrepreneurs in the business world balances in favor of large and well-established companies. This change creates great opportunities for entrepreneurs who do not stay abreast of developments, as well as negative consequences for the insensitive segment. In terms of its effects on social life; The fact that it is widely used in many basic subjects such as education, health, and culture, facilitates the processes in these areas, saves time, and raises the standard of living can be mentioned as very positive points. For the dissemination and development of e-commerce, some studies should be carried out by the entities that are party to the subject. Technology firms, banks, and sectoral companies; While accelerating their activities in security and ease of use, rapid access, investment, and R&D, national organizations should act quickly on issues such as cheap access and dissemination, awareness raising, training, promotion, joint studies, standards, incentives, long-term predictions by international studies. Parallel to this, official institutions should contribute to this process by forming the basis for law and legislation.

Electronic commerce has taken its place in all areas from individuals to companies, states, and international structures in a very short time and has reinforced the phenomenon called globalization. The phenomenon of globalization is based on the liberalization of international and cross-border trade. In electronic commerce, e-commerce is a global phenomenon because it liberalizes the borders in financial terms, even if the physical and geographical borders do not disappear.

Along with the newly produced high-tech products and the opportunities provided by the internet, a different model called the "New Economy" has entered social life, which is flexible, does not care about space, and concentrates beyond national borders. Along with these advances, a new commercial environment called "electronic commerce" has emerged. Electronic commerce is becoming widespread, especially in the services sector. In addition, electronic commerce has a high impact on the communication, finance, distribution, and tourism sectors. In this study, electronic commerce, which is an opportunity provided by the new economy, is examined in terms of its development process of the economy, e-commerce, and the internet its impact on globalization and sectors, country practices, and especially the impacts of a work-life balance were studied.

## ANNEXES

**E-Commerce impacts on work-life balance survey**

Changes in e-commerce affected our social life and work-life balance. Please answer all questions as applicable.

What is your age range

- 20 – 25
- 25 – 35
- 35 – 45

What is your Gender?

- Female
- Male

What is your occupation?

- Local Bank
- Business owner
- Private Sector
- Employed

Do you spend time using the internet during the day for over 5 hours?

- No = %19
- Yes= %81

Do you buy products from the internet frequently?

- No = %8
- Yes = %92

Do you prefer to buy the product from the internet?

- Yes = %75
- No = %25

Do you know the differences between e-commerce and e-business?

- Yes = %80
- No = %20

Do you use a physical card while doing the payment?

- Yes = %46
- No = %54

Have you ever thought to run a business?

- Yes = %88
- No = %12

Is the evaluation of internet usage satisfying for you?

- Yes = %63
- No= %37

Is Covid – 19 had a huge impact on using the internet?

- Yes = %60
- No = %40

Is working remotely/at home well?

- Yes = %86
- No= %14

Should people reduce internet usage?

- Yes = %75
- No = %25

How important is E-commerce impacts on Work-Life Balance?

- Very Unimportant
- Unimportant
- Neutral
- Important
- Very Important

**Open-Ended Questions:**

1. Changes on the internet and economy how affect your work-life balance?
2. What do you think about the new economic systems?
3. What kind of changes in technology helped you to work better and easier?
4. Does e-commerce make things easier for you at working place?
5. Do you prefer new technological systems or traditional ways?