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Air Transportation Management Department

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MASTER THESIS
(EXPLANATORY NOTES)

Theme: «Organization of international cargo delivery in a digital economy»

Done by: Hluchchenko Mykyta

Supervisor: Yuliia V. SHEvchenko

Standards Inspector: Yuliia V. Shevchenko, PhD in Economic, Associate professor

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ВИПУСКНИКА ОСВІТНЬОГО СТУПЕНЯ «МАГІСТР»

Тема: «Організація міжнародної доставки вантажів в цифровій економіці»

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NATIONAL AVIATION UNIVERSITY

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APPROVED BY

Head of the Department

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“ _____ ” _____ 2020

TASK of completion the master thesis

1. Theme of the master thesis entitled “Organization of international cargo delivery in a digital economy” was approved by a decree of the Rector order № 2026/CT.. from 16.10.2020
2. Term performance of thesis: from 05.10.2020 to 31.12.2020.
3. Initial data required for writing the master thesis: statistical and reporting materials of the State Statistics Service of Ukraine, the Center for Transport Research, official websites of the Ministry of Infrastructure of Ukraine, FTP, Transport portal of electronic services, literary sources on the organization of international cargo deliveries and features of the digital economy, Internet sources.
4. Content of the explanatory notes: conceptual bases of the organization of the international delivery of cargoes in the conditions of digital economy; ways of development of the transport portal of electronic services and introduction of the electronic consignment note; assessment of macro-effects from the digitization of the process of international cargo delivery.
5. List of mandatory graphic matters: tables, diagrams, graphs, diagrams illustrating the current state of the problem and methods of solving them.

6. PLANNING CALENDAR

№	Assignment	Deadline for completion	Mark on completion
1.	Collection and processing of statistical data	05.10.2020	done
2.	Writing of the theoretical part	16.10.2020	Done
3.	Writing of the analytical part	26.10.2020	Done
4.	Writing of the design part	16.11.2020	Done
5.	Writing of the introduction and summary	26.11.2020	Done
6.	Execution of the explanatory note, graphic matters and the presentation	02.12.2020	Done

7. Given date of the task: October 05, 2020.

Supervisor of the master thesis:

Yuliia V. Shevchenko

Task was accepted for completion:

Hluchchenko Mykyta

EXPLANATORY NOTE

Explanatory note to the master thesis « Organization of international cargo delivery in a digital economy»: 125 pages, 36 figures, 19 tables, 100 references.

KEYWORDS: INTERNATIONAL DELIVERY, DIGITAL ECONOMY, INCOTERMS, ELECTRONIC COMMODITY-TRANSPORT INVOICE, TRANSPORT PORTAL, EFFECT, TRANSPORT EXCHANGE

The object of study – system of organization of international cargo deliveries in Ukraine.

The objective of the diploma project – conceptual and methodological bases of the organization of the international delivery of cargoes in the conditions of digital economy.

Research methods: The methodological basis for carrying out research was advocated the methods based on the use of economic theory and system approach.

The thesis presents theoretical and methodological substantiation of strategic directions of digitalization of the processes of organization of international cargo delivery. The characteristics of the organization of international cargo delivery in the digital economy and the conditions of international cargo delivery in accordance with the new Incoterms 2020 rules are characterized; analysis of the state and tendencies of development of the market of international transport services in Ukraine; the competitive situation on the Ukrainian market of the organization of international delivery of cargoes is carried out; the characteristic of information-online platforms of the organization of the international delivery of cargo; ways of development of transport portal of electronic services are proposed; recommends the introduction of an electronic invoice as a mandatory prerequisite for the digitization of international freight delivery; the macro-effects of the digitalization of the international cargo delivery process for key stakeholders were evaluated. It is recommended to use materials of graduation work for scientific investigations, in an education process and in expert's practical activity of logistics department.

ABBREVIATIONS

GDP – Gross domestic product

IS – information system

IT – information technology

SWOT – Strengths, Weaknesses, Opportunities, Threats

TS – transport services

CIF Cost, Insurance and Freight (вартість, страхування і фрахт);

CNI Cost and Insurance (вартість і страхування);

COT Світової Організації Торгівлі;

DAT Delivered at Terminal (Доставка на термінале);

DPU Delivered Named Place Unloaded (Доставка на место выгрузки);

ERP Enterprise Resource Planning;

FAS Free Alongside Ship (вільно уздовж борта судна);

FCA Free Carrier (франко перевізник);

FOB Free On Board (вільно на борту);

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INTRODUCTION

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The relevance of the study of digital economy problems and related concepts is determined by the fact that the share of industries that rely on digital technologies is constantly growing. There are processes of penetration of digital technologies into other spheres of society, in particular, into international trade and the organization of international deliveries on the basis of digital technologies, which radically change their technological structure. Some activities have already been completely transformed under the influence of digital technologies. It is to be expected that e-commerce will soon dominate at the household level, and approaches to the organization of trade itself will change greatly. The study of the socio-economic consequences of such changes is of serious scientific interest.

At the same time, the dynamism of the digital economy and the diversity of its manifestations are the reason why many areas of the economy and the impact of digitalization on them remain poorly understood. One of such areas is the organization of international cargo delivery. This explains the choice of the topic of scientific research, the relevance of which does not require additional argumentation, because it is obvious.

The problems of organizing the international delivery of goods have been the subject of research by many scholars. In particular, the works of A.S. Galkin, A. Gorbenko, K.G. Kozina, O.O. Karpenko, V.P. Levada, Yu. A. Davidich, S.V. Smerichevskaya and others are devoted to the organization of international transportation. Peculiarities of the formation of the digital economy are actively considered by many other authors, in particular S.M. Veretyuk, V.G. Voronkova, T.P. Romanenko, V.V. Pilinsky and others. But, unfortunately, there is still too little research on the organization of international cargo delivery in a digital economy. This is what determined the choice of the topic of the diploma research.

Urgency of the research is due to the fact that the main task of the system of international freight delivery by road in a digital economy requires a clear definition of strategic directions for the transformation of traditional approaches to the organization of international freight delivery and the introduction of a fundamentally new model of competitiveness.

So, **the goal** of the work is to develop theoretical and methodological justification of the strategic directions of digitalization of the process of organizing the international delivery of goods.

The main tasks, the solution of which is necessary to achieve the goal of the study are:

- conceptual features of digital economy development are determined;
- the peculiarities of the organization of international cargo delivery in the digital economy are characterized;
- certain features of the conditions of international delivery of goods in accordance with the new rules of Incoterms 2020;
- the analysis of a condition and tendencies of development of the market of the international transport services in Ukraine is carried out;
- assessment of the competitive situation on the Ukrainian market of the organization of international cargo delivery;
- the characteristic of information online platforms of the organization of international deliveries of cargoes is given;
- proposed improvement of the organization of international cargo deliveries through the development of the transport portal of electronic services;
- recommended the introduction of an electronic consignment note as a mandatory prerequisite for the digitization of international cargo delivery;
- the macro-effects of digitalization of the international cargo delivery process for key stakeholders were assessed.

The object of study – system of organization of international cargo deliveries in Ukraine.

The objective of the diploma project – conceptual and methodological bases of the organization of the international delivery of cargoes in the conditions of digital economy.

The scientific novelty of the work lies in the theoretical and methodological justification of the peculiarities of the organization of international delivery of goods in a digital economy, in particular:

improved:

methodology for assessing the macro-effects of digitalization of the process of international cargo delivery, in particular, the identified effects of digitalization for different groups of stakeholders: for the national economy, for business and for citizens;

received further development:

the concept of introduction of the electronic consignment note, in particular, the offered stage of practical realization of this concept is offered;

directions of improvement of international freight transportation due to the proposal of "using Uber's principles" of freight transportation, divergence (diversity) of IT-products in the transport sphere and creation of "transport IT-platforms".

According to the results of the study, a number of conclusions were formulated, some of which are of a general conceptual nature, and most of them relate to the practical aspects of improving the management system of international cargo deliveries in a digital economy.

A comparative analysis of online platforms of transport exchanges, which are presented on the market of Ukraine, as well as proposals on the phased introduction of electronic consignment note as a prerequisite for digitalization of international cargo delivery is of practical importance for the organization of international cargo deliveries by freight forwarding companies.

Methodology and methodological foundations of the study based on the basis of a comprehensive and systematic approach, using general scientific and economic research methods, in particular: methods of scientific logic, grouping, comparison and generalization, methods of tabular and graphical analysis, methods of structural-factor and economic-mathematical analysis, project forecasting method.

1. THEORETICAL PART

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1.1. The concept and significance of digital technologies

In our life today, digital technology surrounds us from all sides. Broadly speaking, digital technologies are those technologies that use information in digitally encoded form. This code is called binary code. A binary code represents text, computer processor instructions, or any other data using a two-symbol system. The two-symbol system used is often "0" and "1" from the binary number system. The binary code assigns a pattern of binary digits, also known as bits, to each character, instruction, etc.

American engineers began developing digital technology in the mid-twentieth century. Their techniques were based on mathematical concepts suggested by the seventeenth-century German mathematician, Gottfried Wilhelm Leibniz, who proposed a binary computing system. His innovation inspired such numerical codes as American Standard Code for Information Interchange (ASCII) that described objects with digits.

Digital technology enables immense amounts of information to be compressed on small storage devices that can be easily preserved and transported. Digitization also quickens data transmission speeds. Digital technology has transformed how people communicate, learn, and work [98].

The digital capability of a business is fundamental to remaining competitive in today's market. Digital technologies are rapidly changing and evolving, which in turn increases competition and the need for companies to innovate quickly. It has never been more dangerous for companies to neglect the importance of digital technologies.

The digital strategy a company pursues can make or break an organization. Today's business landscape is becoming increasingly complex. For a company to be successful now, it is vital that they adopt digital innovations that can help them to achieve their objectives and stay ahead of their competitors. Adopting digital technology can have a number of benefits for the company that chooses to do so [98].

To achieve business success, efficiency and productivity are vital. Digital technology can help improve communication, collaboration, content management,

access to analytics data and social networking as well as staff and customer experience.

Digital is often used as a synonym of computing, information technology or technology. The following are common types of digital things.

Digital electronics. Devices that contain computers or that process binary data.

Digital media. Media such as photo, music and video that is captured, stored and delivered as binary data.

Digital content. Content such as documents, news and books that are delivered as binary data, For example, e-book is digital content.

Digital economy. A term for industries that are based on information technologies and use digital technologies in their activities.

Digital data. Data stored in binary. Generally speaking, all computerized data.

Digital technologies touch us almost in each sphere of our life. Examples of digital technology may be as follows: Websites, Buying and Selling Online, Smartphones, Digital Televisions, Video Streaming, eBooks, Digital Music, Geolocation, Blogs, Social Media, Computers, Printers, Self-Scan Machines, ATM's, Digital Cameras, Cars and Other Vehicles, Clocks, Robotics, Drones and Guided Missiles, Banking and Finances

Digital technology has transformed nearly every aspect of modern life. Travel, work, shopping, entertainment, and communications are just some of the areas that have been revolutionized in recent decades. It's now rare to find an electronic device or piece of machinery that doesn't incorporate digital technology in some way. Let's consider some advantages of using digital technologies (Fig. 1.1) [99].

1. Social Connectivity. Digital technology makes it easy to stay in touch with friends, family, and work remotely, even if you are in another part of the world. You can communicate by words, video, audio, and exchange other media. Websites, apps, and software have all been created to help users to socialize.

2. Communication Speeds. Internet speeds have increased exponentially since the early days of dial-up. Ever faster broadband enables the transfer of large amounts of information across the web almost instantaneously, making it possible to stream

video and audio in real time, send large data files, and access data from virtually anywhere in the world.



Fig. 1.1. Advantages of digital technologies [99]

3. Versatile Working. The nature of work has been transformed by digital technology. Increased connectivity options mean that many people now have far more opportunities for working from home, as remote working becomes increasingly common. Many jobs can now be done from hundreds, or even thousands of miles away without difficulty. Without the need for all workers to be present in the same building, many other flexible working practices are now possible.

4. Learning Opportunities. Anybody with access to the internet now has access to a huge proportion of the world's knowledge over the web. Lessons and courses can now be delivered virtually online. Communication advances mean that you can now easily communicate with most of the world's population and learn directly from sources, for example if you are trying to understand foreign events, or learning a new language. Digital technology can also be easier to use for people with disabilities and often give them equal access.

5. Automation. Digital technology is increasingly making machines smarter. In some cases, the machines no longer need humans to operate them, freeing up workers from often boring tasks for more interesting pursuits. In other cases, smarter machines mean better standards of safety, or a better experience for the user. Products and services drop in price as the technology develops and becomes more common. Many tasks can now be done directly by customers, rather than having to be done through another person acting as an intermediary, for instance, booking a holiday.

6. Information Storage. Digital technology enables the storage of massive amounts of information in relatively small spaces. Large amounts of media, such as photos, music, videos, contact information, and other documents can be carried around on small devices like mobile phones. As well as physical locations, data can also be stored online, enabling it to be accessed from any device which has internet access.

7. Editing. One of the great advantages of digital technology over traditional media is that the information can be easier to edit or manipulate. Word processing has brought about a revolution in the editing of text. Video editing, which used to require expensive studios and equipment, can now be done on a laptop in a bedroom. All sorts of photographic effects are now available, as well as the ability creatively alter images.

8. Accurate Duplication. One of the great things about digital technology is that it enables the exact duplication of media. For instance, you can write a work report and email it to multiple recipients, or you can distribute multiple copies of photos to family and friends. Breakthroughs in technology are now happening in the field of 3D printing, which looks set to radically transform our world.

9. GPS and Mapping. Finding your way around used to involve referring to a paper map, but digital combined with satellite technology has transformed travel. GPS services can now pinpoint your position accurately, update you on traffic jams and road closures in real time, and give you lots of up-to-date information such as time of arrival at your destination, as well as alternative routes. If you want to find a gas station or drugstore that's open, that's easy too.

10. Transportation. Many trains and airplanes already rely to an extent on digital technology. Road vehicles, such as cars and trucks, will become fully automated in the not too distant future. Accessing timetables, as well as booking planes and trains now often takes place online. Passports contain digital chips that hold information, enabling self-service machines to speed up the process of checking in and passing through customs.

11. Low Cost. Aside from paying for an internet service and the basics like a modem, much of what the digital world offers can be accessed for free. Sending an email, communicating via a video link-up with family, and surfing the internet generally cost nothing. It can provide opportunities for low cost self-education, setting up a business, buying and selling items, or earning money online.

12. Entertainment. The entire entertainment industry and the way that people amuse themselves has been radically transformed. Many people get their fun from online social media, or playing computer games. Traditional media has evolved too, as televisions and broadcasting have become digitalized, along with radio.

13. News. Increasing numbers of people get their news online, either via a website or social media. Even traditional news media, such as TV and radio, have been digitalized. People have more options for news sources than ever, and most of it is available 24 hours per day. Independent and do-it-yourself journalism is now very common, as well as ordinary people taking photos and videos on their phones at locations where a news event is taking place.

14. Warfare. Advances in technology mean that wars can increasingly be fought remotely, avoiding the risks associated with having soldiers physically present on or above the battlefield, where they are prone to injury or death. Drones and missile technology are particularly reliant on digital technology to work effectively, but most machinery is being gradually becoming increasingly automated.

15. Banking and Finance. There's no doubt that digitalization has led to a revolution in financial matters. Online banking done either through a laptop, tablet, or phone app is now the norm. Bank users can now check their incoming and outgoing payments remotely, as well as arrange money transfers and bill payments. Outside of

banking, other financial matters, such as buying and selling currency and shares can be dealt with online. Transferring money between accounts both nationally and internationally has also seen a great deal of innovation in recent years.

16. Smaller Sized Devices. One general effect of digital technology that is almost taken for granted is that devices can be made much smaller. The phones that we carry around are mini-computers, for example, capable of surfing the net, working as calculators, planning journeys, capturing and playing photos, audio, and videos, providing games for our amusement, as well as operating as phones and having other functions. Smaller devices generally mean more portability and less space used up in living spaces.

The measures that need to be promoted to ensure the safe and responsible use of digital technology have been stated as follows [98]:

Prevention. The prevention activities that involve digital technology is better than coping with the problems that arise. An effective prevention strategy is comprised of activities, such as, promotional that guide the learning of the young individuals in the digital world and protective, these aim to alleviate the risk by implementation of protecting, support and intervention strategies.

Incident Response. There are occurrence of risks, and to cope up with them in an efficient manner, it is vital to eliminate the risks associated with incidents. The enterprises develop response plans, before any kind of incident occurs. The main purpose of the incident response is to alleviate distress, and maintain security and protection. Emphasis is put upon the behaviour of the individuals and one should maintain the integrity of the digital services.

Response Planning. The individuals and the staff members in organizations should identify the roles and responsibilities. When individuals are aware that they have to make use of digital technology for efficiency, assist and make provision of security, then they are able to make effective use of it.

Decisions about Inappropriate and Unlawful Conduct. The usage of digital technology in the present existence is used for almost all purposes. These include, education, business, administration, management, leisure, recreation, generating

information, knowledge, awareness, research, writing and communicating. If individuals misuse technology or get involved into any type of unlawful conduct, then it is vital to make appropriate decisions to prevent the unlawful conduct from taking place in future and individuals involved need to be given warning.

Effective Management. When individuals are working on technology, they need to pay adequate attention and put emphasis upon its management and administration. For instance, computers and laptops need to be made use of and stored in a clean and dry place. It is recommended that when individuals possess awareness and knowledge about the usage of technology, only then they should make use of it.

Awareness of Digital Technology and Information. In educational institutions and organizations, there is usage of technology on a comprehensive scale and all the members of the organization carry out their work through the usage of computers and mobile devices. Therefore, there is availability of large number of machines in all offices. The individuals possess different educational qualifications, but it is vital that they should possess the skills and abilities regarding ownership of digital technology and information

Using Social Media and other online Services in Teaching and Learning. Social media and other online services make provision of a range of tools that support innovative teaching practices and enhance student learning in the field of education. The schools need to make use of policies and procedures that promote utilization of online services in teaching and learning. These include, account ownership, content ownership, privacy and guiding the online behaviour of students.

Ethics and Principles. When individuals are making use of digital technology for their own personal use, to prepare a project or assignment or report or to communicate with other individuals, it is vital they should follow the ethics and the principles. The technology should not be made use of to harm or to impose detrimental effects upon anybody. It should be made use of to generate well-being of the individuals and communication and impartment of information to the individuals is done in a rapid manner.

1.2 Defining and Conceptualizing the Digital Economy

The first place where we look up the definition of the term “Digital Economy” is encyclopaedia Wikipedia. Definition from this popular encyclopaedia sounds as follow:

Digital Economy refers to an economy that is based on digital computing technologies, although we increasingly perceive this as conducting business through markets based on the internet and the World Wide Web. The digital economy is also referred to as the Internet Economy, New Economy, or Web Economy. Increasingly, the digital economy is intertwined with the traditional economy, making a clear delineation harder [98].

Don Tapscott first coined the term digital economy in his 1995 best-selling book “The Digital Economy: Promise and Peril in the Age of Networked Intelligence” [99]. The researcher attributed the most important consequences of the global economy digitalization to a sharp decrease in transaction costs, the emergence of new business models and, as a result, the exclusion of intermediaries due to direct interaction between the consumer and the supplier. The author predicted many particular effects of the upcoming digitalization.

Nicholas Negroponte, founder of the Massachusetts Institute of Technology's Media Lab and author of the 1995 book “Being Digital”, has described the digital economy as using "bits instead of atoms" [98]. According to Negroponte, in comparison with the traditional market, the advantages of digitalization include:

- lack of physical weight of products that can be replaced by information volume;
- significantly lower costs for the production of electronic goods and less space occupied by electronic media;
- the virtual nature of economic relations, leading to a decrease in the need for raw materials;

- the emergence of digital currencies, which today is clearly illustrated by the growing cryptocurrency market;
- instant global movement of goods and services via the Internet.

Let’s consider some approaches to the definition of the term “digital economy” (Table 1.1) [99].

Table 1.1

Some approaches to the definition of the term “digital economy”

№	Source	Definition
1	Oxford Dictionary	An economy which functions primarily by means of digital technology, especially electronic transactions made using the Internet.
2	Organisation for Economic Co-operation and Development	The digital economy is comprised of markets based on digital technologies that facilitate the trade of goods and services through e-commerce.
3	European Union	The single most important driver of innovation, competitiveness and growth in the world
4	The Economist Intelligence Unit and IBM	One that can provide a high quality of ICT infrastructure and harness the power of ICTs to benefit consumers, businesses and governments

As we can see from the above definitions, digital economy is a new evolutionary form of economy that is based on the use of information technologies. In this digital economy stage, we are trying to establish self-serving, borderless, universal trade practices that can be entirely defined, established, conducted, consumed, and paid using digital methods.

According to Thomas Mesenbourg (2001), [100] three main components of the “Digital Economy” concept can be identified:

- E-business infrastructure (hardware, software, telecom, networks, human capital, etc.),
- E-business (how business is conducted, any process that an organization conducts over computer-mediated networks),
- E-commerce (transfer of goods, for example when a book is sold online).

Electronic commerce, commonly written as E-Commerce, is the trading in products or services using computer networks, such as the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds

transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail. [100]

E-Commerce businesses may employ some or all of the following:

- online shopping websites for retail sales direct to consumers,
- providing or participating in online marketplaces, which process third-party business-to-consumer or consumer-to-consumer sales,
- business-to-business buying and selling,
- gathering and using demographic data through Web contacts and social media,
- business-to-business electronic data interchange,
- marketing to prospective and established customers by E-Mail or fax (for example, with newsletters),
- engaging in pretail for launching new products and services.

Petail (also referred to as pre-retail, or pre-commerce) is a sub-category of E-Commerce and online retail for introducing new products, services, and brands to market by pre-launching online, sometimes as reservations in limited quantity before release, realization, or commercial availability. Petail includes pre-sale commerce, pre-order retailers, incubation marketplaces, and crowdfunding communities.

Electronic business, or E-Business, is the application of information and communication technologies (ICT) in support of all the activities of business. Commerce constitutes the exchange of products and services between businesses, groups and individuals and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses or E-Business refers to business with help of Internet i.e. doing business with the help of Internet network. The term “E-Business” was coined by IBM's marketing and Internet team in 1996. [98]

Accordingly to Martin Kütz [99] E-commerce has the next constituent attributes:

- Digitalization of business;

- This means a comprehensive usage of ICT (Information & Communication Technology) not only within a business organization, but now through a more and more seamless linking and cooperation of information and communication systems of all involved business partners;

- The comprehensive usage of ICT has been enabled by some technologies and technical standards, which have been accepted globally;

- Focus on business processes:

- the total processes, running through several organizations and crossing their boundaries, are supported;

- automating business processes no longer only within organizations, as it was “the” traditional objective of ICT, but now the automation is related to the total process, running through all involved organizations, and not only to the sub-process within the own organization;

- increasing the speed of business processes. Additional potentials can be realized with the coupling of processes between different organizations;

- increasing the economic efficiency of business processes, again through coupling of business processes at the boundaries of the business partners.

- Usage of a global network:

- Internet plays a dominant role and has become a universal technical infrastructure. Thus it builds a global virtual place where every organization and person being interested in making business can come together without geographical and time restrictions;

- global networks allow the exchange of information without any restrictions in time and independently from any geographical distances;

- it’s assumed that the Internet is always up and running (7·- 24h).

- New potentials and opportunities for cooperation:

- more or less independent persons and/or organizations work together;

– business actors can come together whenever they want it or whenever there is a need.

These considerations lead to our final definition [100]:

E-Commerce is the exchange of goods and services between (usually) independent organizations and/or persons supported by a comprehensive usage of powerful ICT systems and a globally standardized network infrastructure.

For this purpose the business partners have to couple their business processes and their ICT systems. These systems have to work together temporarily and seamlessly and have to share, exchange and process data during the whole business process and across the boundaries of the cooperating organizations.

Data security and data privacy as well as the compliance with laws and other policies and procedures have, of course, to be guaranteed.

1.3. Typology of information and communication technologies (ICTs) sub-sectors

Information and communications technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audiovisual systems, that enable users to access, store, transmit, and manipulate information. [100]

ICT encompasses both the internet-enabled sphere as well as the mobile one powered by wireless networks. [100] It also includes antiquated technologies, such as landline telephones, radio and television broadcast – all of which are still widely used today alongside cutting-edge ICT pieces such as artificial intelligence and robotics. The list of ICT components is exhaustive, and it continues to grow. Some

components, such as computers and telephones, have existed for decades but smartphones, digital TVs and robots, are more recent entries.

The term information and communication technology is generally accepted to mean all technologies that, combined, allow people and organizations to interact in the digital world. The components of ICT (Fig. 1.2.): cloud computing, software, hardware, digital transactions, digital data, internet access.



Fig. 1.2. Components of ICT

Source: [100]

The ICT Sector covers companies supplying products and services to the information technology economy in its broad sense in areas such as: big data; e-commerce; e-government; e-health, e-care; cloud services; on-line platforms; protection of personal data; audio-visual media services; on-demand services; e-transport; e-energy; cyber security; robotics; 3D printing; Internet of Things; embedded technology; wearable and apps; mobile cloud; smart cities solutions. Recent trends underline the concept of Circular Economy – use of digital information technologies or engineering/ physical technologies to help businesses become more

efficient in their product design, extending the product lifecycle, greater durability or reusability/ recycling and resource efficiency. [99]

Relevant sub-sectors include:

– Information Technology Equipment. IT equipment is technological hardware used in the processing of information in the form of data (input, process, output, communication, and storage). The Sub-sector covers products such as: smart handheld devices; media tablets; 3D printing; wearable technologies.

– Information Technology Services. IT services is the provision of labour-based services, which assist individuals and organizations in the implementation, management, and operation of computer systems, peripherals, storage, network equipment, and software. The Sub-sector includes: IT consulting; system integration; IT education; satellite services.

– Information Technology Software. Software is a set of instructions that cause a computer to perform one or more tasks. The Sub-sector covers products such as: virtual machine software; applications; data protection; network solutions; software defined networks.

– Telecommunication Equipment. Telecommunications equipment is hardware used for the purposes of telecommunications. The Sub-sector covers products such as: smart phones; routers; IPTV equipment.

– Telecommunication Services. Telecommunication Services are services provided by a telecommunication provider. The Sub-sector includes: internet access; mobile data services; fixed voice telephony.

Today, people around the world rely on mobile communication, internet access and social media for interactions with each other, sharing information and obtaining new knowledge and services, while governments and businesses increasingly prefer the internet for disseminating information, delivering services, communications, marketing and doing business in general.

The digital economy's expansion is driven by digital data. Global Internet Protocol (IP) traffic, a proxy for data flows, grew from about 100 gigabytes (GB) per

day in 1992 to more than 45000 GB per second in 2017. By 2022 global IP traffic is projected to reach 150700 GB per second. [98]

And the second driver of digital economy's expansion is digital platforms. The power of platforms is reflected in the fact that seven of the world's top eight companies by market capitalization use platform-based business model.

A platform business model focuses on facilitating interactions across a large number of participants. These interactions could take the form of short-term transactions like connecting buyers and sellers or they could involve formation of longer-term relationships or collaboration to achieve a shared outcome.

The role of the platform business is to provide a governance structure and a set of standards and capabilities that facilitate interactions at scale so that network effects can be unleashed. [90]

There are three main participants in the platform business model:

- Consumers – the participants that consume, and pay for, the value units;
- Providers – the participants that provide, and get compensated for, the value units;
- Platform Owners – the participants that provide the platform, manage the core interactions, implement the filter, and provide additional services that attract consumers and providers and make interaction via the platform easy and enjoyable.

Figure 1.3 shows a mind-map representation of multi-sided platforms.

The world economy is transforming due to the rapid evolution and growing use information and communications technologies. One of the distinguishing features of recent years has been the exponential growth in the aggregation of machine-readable information, or digital data, over the internet. This has been accompanied by an expansion of big data analytics, artificial intelligence (AI), cloud computing and new business models (digital platforms). With more devices accessing the internet, an ever-increasing number of people using digital services and more value chains being digitally connected, the role of digital data and technologies is set to expand further. As a result, access to data and the ability to transform data into digital intelligence have become crucial for the competitiveness of companies. Producers and exporters

are becoming increasingly dependent on data analytics as operations get more digitized, and because they use support services that require access to data such as shipping and transportation, retail distribution and finance.

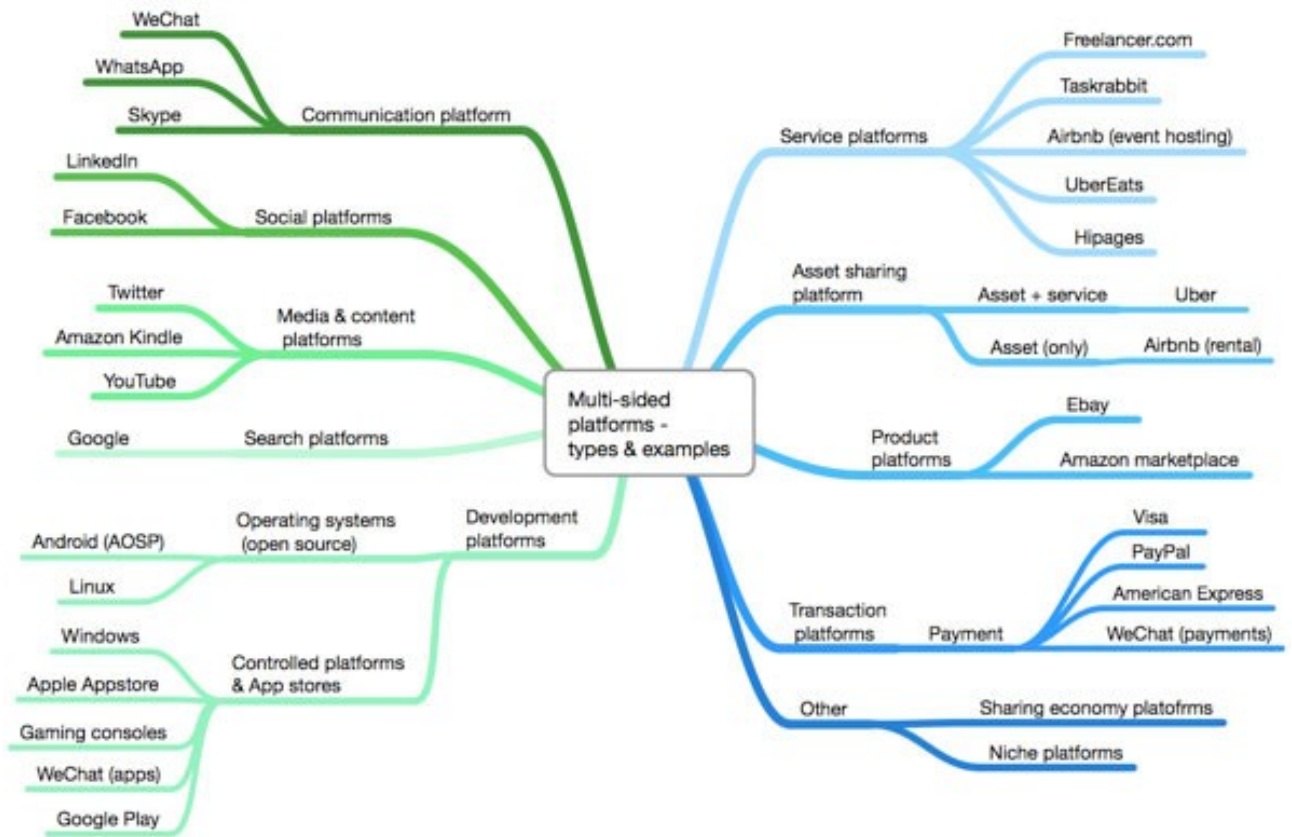


Fig. 1.3. Multi-sided Platform Classification

Source: Platform business model, Innovation tactics [100]

The evolution of the digital economy is closely associated with progress in several frontier technologies, including some key software-oriented technologies, such as blockchain, data analytics and AI (Fig. 1.4).

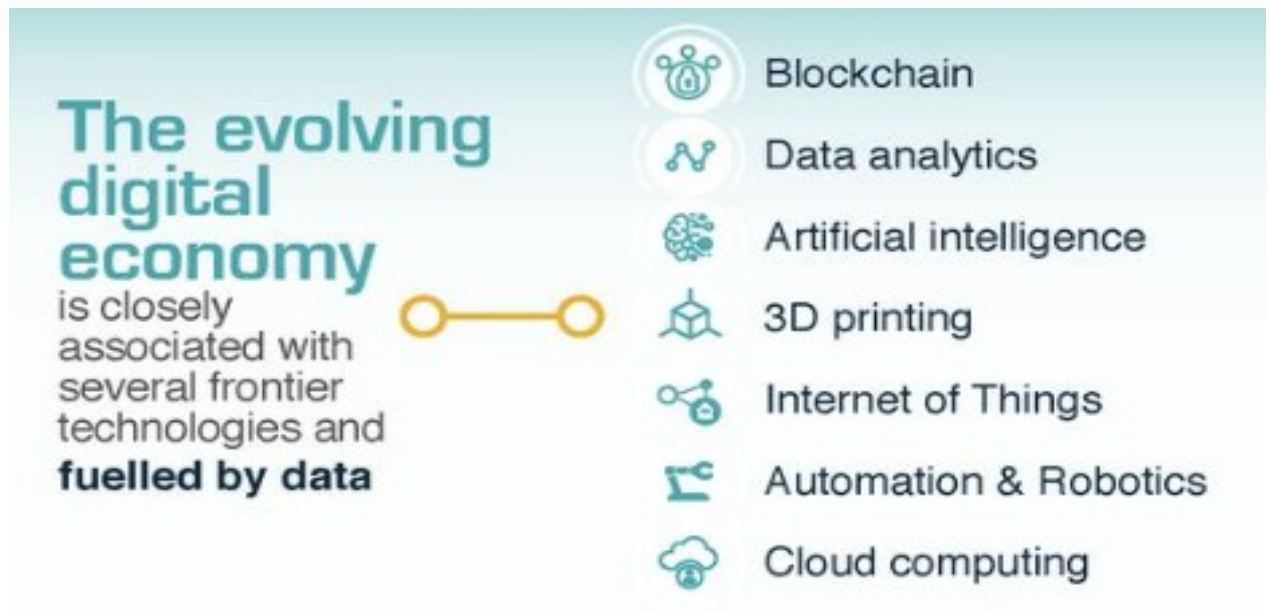


Fig. 1.4. Recent trends in the Digital Economy

Source: Digital Economy Report 2019, UNCTAD

Other emerging technologies range from user-facing devices (such as computers and smartphones) to 3D printers and wearable, as well as specialized machine-oriented hardware, such as IoT, automation, robotics and cloud computing.

1.4. Features of the organization of international cargo delivery in a digital economy

International transport services are sold and purchased in international transport markets, which vary depending on the modes of transport, cargo transported, and regional characteristics. International transport can be direct (without transshipment operations), mixed (using two or more modes of transport), direct mixed (using different modes of transport, but on the same transport documents).

International transport services include not only direct transport activities, but also a number of related operations (delivery of goods to the nearest cargo terminal - port, railway junction, etc.; loading, reloading, unloading of transported goods or

luggage; temporary storage at intermediate points, reissuance of documents, and sometimes insurance).

The costs associated with the payment of trunk modes of transport and related operations, are the transport costs of the cargo owner.

In the international transport process involved the company-owner of the goods and companies-carriers, which enter into a contract of carriage.

In addition to cargo owners, stevedoring firms (freight terminal operators) with which a service contract is concluded and freight forwarders (in some countries freight forwarders are called freight agents, commission agents, brokers, etc.) are involved in transport operations.

Under the freight forwarding agreement, the cargo owner instructs the freight forwarder to perform precisely defined operations - loading and unloading of his cargo, their storage, registration of cargo and customs documents, settlements with carriers and stevedores, protection of their commercial interests in courts and arbitration, etc. In this case, the owner of the goods may enter into contracts directly with freight forwarding companies or a contract with the general freight forwarder, which is entrusted with the organization of transportation as a whole.

The modern transport network and the structure of transport transportation have developed in the process of world economic development and the international division of labor, they, in turn, have a very strong influence on these processes. The general trend is that international freight is growing more slowly than international trade, as the volume of raw materials transported, especially oil, grows slightly or not at all, and material-intensive production moves to sources of raw materials.

The transport network is expanding, but unevenly across different modes of transport. The share of transport in world GDP and especially in the GDP of developed countries is declining, the same applies to the size of the transport component in the price of goods.

International transport infrastructure, including transport terminals, is often created and controlled by the state. The presence of private railways and highways does not contradict the general rule.

However, vehicles are usually privately owned, and the transport services market is operated almost exclusively by private companies. It should be added that international transport and international transport routes are not separated from domestic and the same transport companies can engage in both domestic and international transport.

International traffic is governed by multilateral agreements at the regional and global levels. Numerous (about 100) intergovernmental organizations operate in this field, including specialized UN bodies: the International Maritime Organization and the International Civil Aviation Organization.

As already mentioned, the world transport network is constantly growing, but unevenly by mode of transport. This unevenness reflects scientific and technological progress in transport and changes in the structure of freight. Thus, according to the UN, in the second half of XX century. the network of railways and inland waterways has shrunk, the length of roads has increased almost 2 times, and airways - 3 times. At the same time, the length of oil pipelines increased 4.2 times, and the main gas pipelines - 6.5 times.

Transport services differ depending on the type of transport, the subject of the transport operation (cargo, passenger, luggage), transport characteristics of the goods, the frequency of transportation.

The transported goods are divided into dry or bulk (coal, ore), bulk (grain, cement, fertilizers), bulk (oil, petroleum products, etc.) and general (finished products).

The main direction in the development of the world transport system is the synchronization of different types of transport, their joint functioning in mixed transport. Transportation of goods in containers and general cargo in general is growing especially intensively. Comprehensive provision of such transportation on an international scale is practiced in the creation of transport corridors.

In the digital economy, the transport and logistics sector of the economy, as well as other industries, is undergoing significant changes, and, like any change, they are associated with risks and opportunities: new customer expectations, new market

participants, new technologies, new business models, new requirements for staff competencies, etc.

According to research by the international company PricewaterhouseCoopers (PwC), which has a 160-year history and is one of the so-called four world leaders in audit companies, 68% of managers of transport and logistics companies expect that the change in basic production technologies and services in the world, will dramatically affect their business. 65% of managers believe that the need to significantly change the model of their business will also be affected by innovative changes in sales channels [69]. According to PwC analysts, a number of key factors influencing the development of the transport and logistics industry today can be identified (Fig. 1.5):

- digitization;
- changing the dynamics of domestic markets;
- changes in international trade;
- changes in the main processes in connection with the introduction of new software or new technology [68].

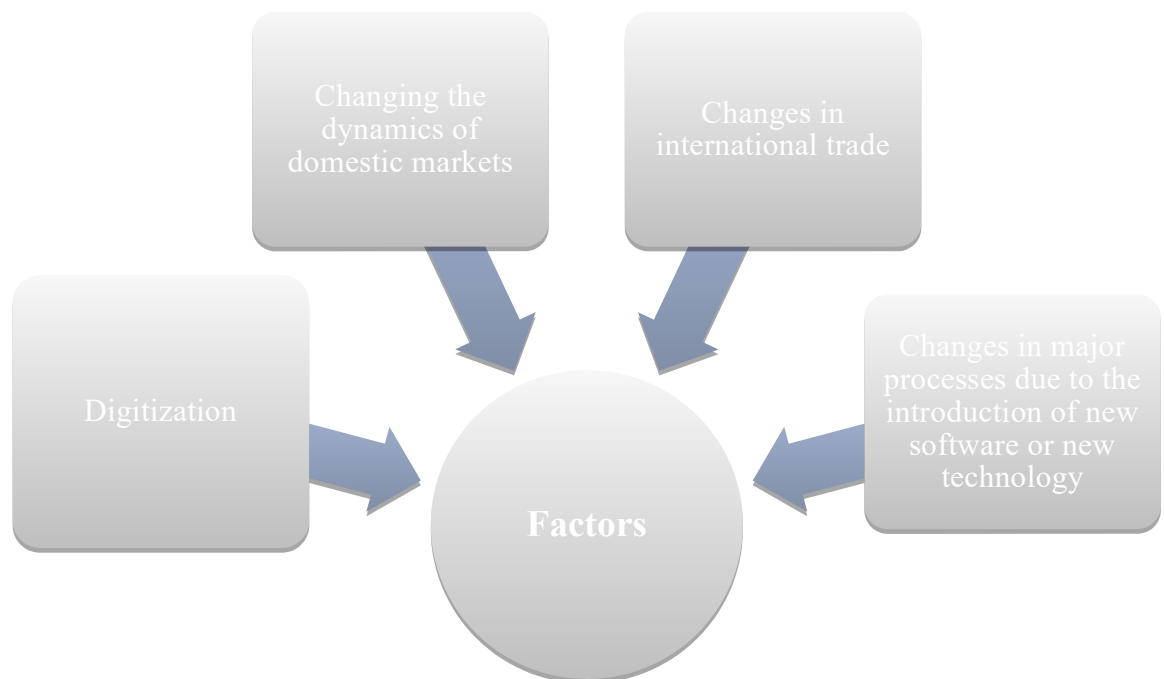


Figure 1.5 - Factors influencing the development of the transport and logistics industry today

In the first place in this list of factors influencing the development of the transport and logistics industry, as we see, is the digitalization of the economy. Therefore, we will analyze the impact of digitalization on the expected transformation of the transport and logistics industry.

The impact of digitalization can already be seen in changes in administrative, production and commercial processes.

Digital solutions have already gone beyond information and communication technologies (ICT) or ERP systems and allow the development of new business processes and models, including integrate the entire value chain. New technologies make it possible to switch sales and other important elements related to service delivery to the digital environment. Digitization of most corporate processes is essential for the implementation of the concept of Industry 4.0.

According to the survey, 54% of companies expect an increase in revenue due to digitalization [92]. Digitization in the near future will not only significantly simplify basic business processes, but also significantly affect the change in the range of services, products and business models. In addition, digitalization, paradoxically, solves the problem of lack of specialists. Digitization is expected to change consumers' approach to business interaction. Changes can already be observed in the processes of online and mobile ordering and payment for transport, including in the provision of taxi, car-sharing and public transport services [69].

DHL's Logistics Trend (LTR) is a comprehensive analysis of the 28 most significant trends in business, technology and society that affect the future of logistics, is a "road map" for logistics innovation and helps to structure and intensify leading projects and research in the field . The new 2018/19 LTR focuses on the digital revolution in the industry and its impact on four key factors determining the future of logistics: customer focus, environmental sustainability, technology and people [92] (Appendix A-E).

Unfortunately, few companies today are serious about how the cooperation and composition of participants in the supply chain will change as a result of the

digitalization of the economy. Although each individual company must be ready to re-evaluate and find their new role in the supply chain in the new environment.

In the age of digital technology, speed is more important than ever. As a result, companies need to create a flexible supply chain network that allows continuous monitoring of development and provides rapid adaptation in this changing environment. And higher education institutions that train specialists for the transport and logistics sector should not only urgently review the content and structure of educational and professional programs, but also radically change the conceptual and methodological approach to training for the economy [69].

1.5. Terms of international delivery of goods in accordance with the new rules of Incoterms 2020

When concluding a foreign economic contract, it is necessary, first of all, to take into account the requirements of the Regulation on the form of foreign economic agreements (contracts), approved by the order of the Ministry of Economy and European Integration of Ukraine dated 06.09.2001 № 201.

Clause 1.5 of the Regulations of the Agreement states:

- type of transport;
- basic terms of delivery according to Incoterms;
- delivery time of goods.

Incoterms were first introduced by the ICC in 1936 to establish generally accepted definitions and rules for the supply of goods between partners around the world. Since then, the ICC has periodically reviewed Incoterms® rules to reflect changes in the international trade system.

Currently, all business representatives use the rules of Incoterms in the 2010 edition, but today the new trading terms of Incoterms 2020 are being developed in the International Chamber of Commerce (ICC) by a committee of experts - the Editorial

Group. The committee includes lawyers from the United States, Britain, France, Turkey, and Germany, and for the first time includes representatives from China and Australia. The new version of Incoterms simplifies some of the rules of international supply, removes unnecessary supply bases that have sometimes caused confusion in the use of trade terms, clarifies all the terms of supply for exporters and importers around the world.

The Incoterms 2020 rules provide for the demonstration of market needs for bill of lading and the Incoterms FCA (free carrier) rules.

Incoterms 2020 rules equalize different levels of insurance coverage in terms of delivery CIF (cost, insurance and freight) and CIP (transportation and insurance paid to).

Incoterms 2020 rules include arrangements for own transport in terms of delivery FCA, DAP (delivery in place), DPU (Delivery in place with unloading), DDP (Delivery with payment of duty).

There is a name change from three letters, DAT (delivery to the terminal) to the DPU.

Incoterms 2020 rules include safety requirements within the obligations and costs of transportation [45].

Structurally Incoterms 2020 look the same as in the previous version: eleven three-letter abbreviations ranging from "EXW" (Ex-Works) to "DDP" (Delivered Duty Paid) (Appendix K), which are still divided into 2 categories depending from the type of transport (table.1.1).

Each Incoterms 2020 rule contains two sections of ten articles:

A1 / B1 General responsibilities

A2 / B2: Delivery

A3 / B3: Transfer of risks

A4 / B4: Transportation

A5 / B5: Insurance

A6 / B6: Transport and transport documents

A7 / B7: Customs clearance of export / import

A8 / B8: Inspection / packaging / labeling

A9 / B9: Allocation of expenditures

A10 / B10: Message

Section "A" stipulates the responsibilities of the seller, and section "B" - the responsibilities of the buyer.

All costs related to various aspects of sales are now listed in Articles A9 / B9 "Cost Allocation" for each Incoterms rule, as well as in the relevant Incoterms articles to which they belong.

The purpose of this change is to provide users with a complete list of costs in one place, so that the seller and buyer are better informed about the costs for which everyone will be responsible in accordance with the definitions of Incoterms 2020 [46] (Table 1.2).

Table 1.2

Structure of Incoterms – 2020

Incoterms rules - 2020 for any type of transport	Incoterms - 2020 rules for maritime and inland water transport
EXW - Ex Works FCA - Free Carrier CPT - "Carriage Paid to" CIP - "Carriage and Insurance Paid to" DPU - "Delivered Named Place Unloaded" DAP - "Delivered at Place" DDP - "Delivered Duty Paid"	FAS - "Free Alongside Ship" FOB - "Free on Board" CFR - "Cost and Freight" CIF - Cost Insurance and Freight

Source: [46]

Figure 1.6 shows the interpretation of 4 groups of rules Incoterms 2020.

Incoterms 2020 provides for the following changes in the terms of delivery of products:

1. Deletion of the term EXW (self-pickup) from the rules of Incoterms.

This will be a very important change, as the terms of delivery of EXW are used by companies in many countries only for domestic trade and practically not applicable to international trade. In addition, the basis for the supply of EXW in the edition of Incoterms in 2010 contradicts the new Customs Code of the European

Union, as the responsibility of the exporter comes after the export customs clearance of goods for export [45].

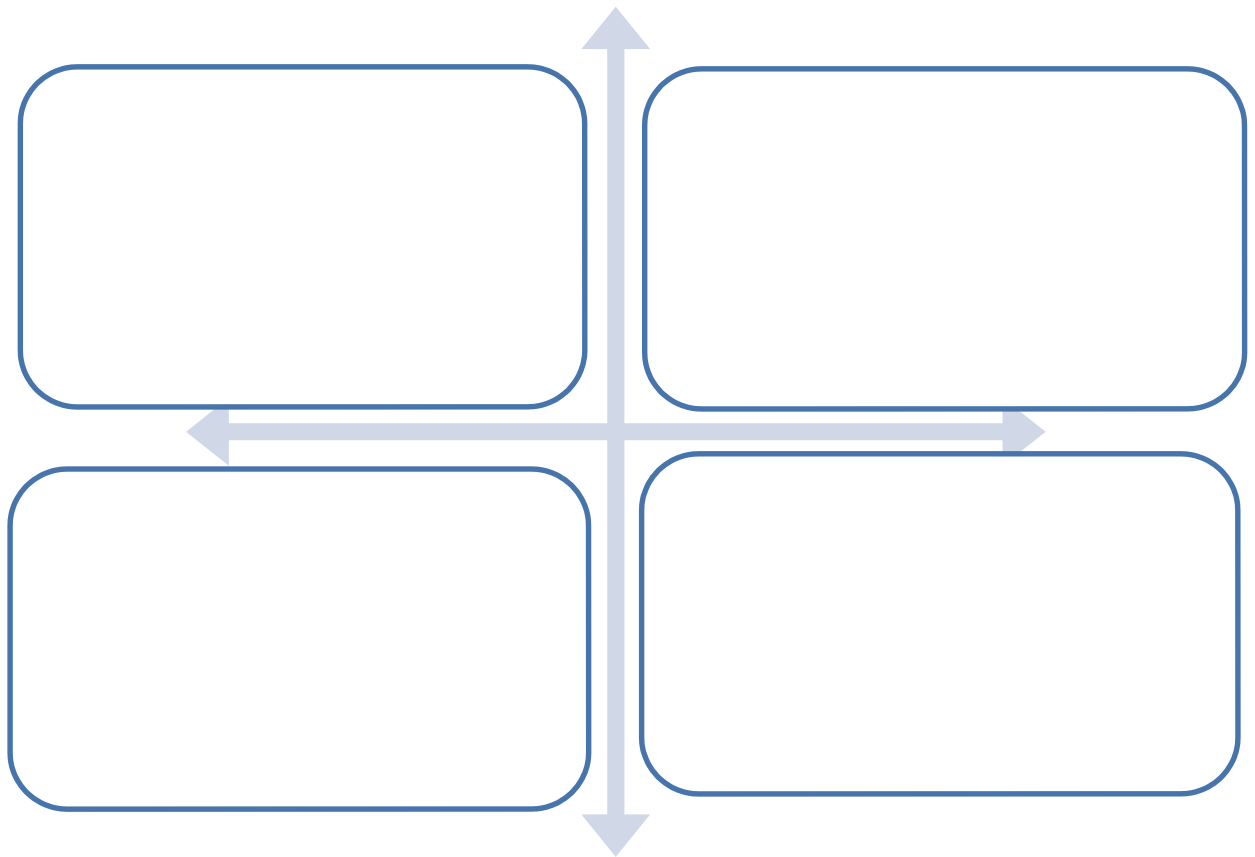


Fig. 1.6. Deciphering the rules of Incoterms 2020

Source: compiled by author

2. Deletion of the term FAS (free along the vessel)

Terms of delivery FAS (Free Alongside Ship) is now used when the goods are delivered to the seller at the port of departure of the exporting country and therefore is used very rarely. When using the FCA delivery base, the goods can also be delivered to the port (or dock), as under FAS delivery conditions, as the dock is part of the seaport (terminal). On the other hand, if the term FAS is used and there is a delay in the arrival of the vessel, the goods will be in the dock for several days available only to the buyer, and, conversely, if the vessel arrives in advance, the goods will not be available to the buyer. In fact, the terms of delivery of FAS are used only for the export of mainly bulk goods (minerals and cereals).

3. Division of the term FCA (ex-carrier) into two bases of delivery

The FCA (Free Carrier) delivery condition is the most commonly used term incoterms (almost 40% of international trade contracts are concluded with this rule) because it is very flexible and versatile. The main advantages of the FCA are - the use of any mode of transport and the use of any place of delivery of goods located in the country of the seller. It can be a store, warehouse, seaport, airport, or just the seller's address. An analysis is currently underway to split the FCA base into two terms in Incoterms 2020 - one for ground delivery and the other for marine container deliveries.

4. Change of FOB and CIF delivery conditions for container transportation

Currently, the terms of delivery FOB (Free On Board - free on board) and CIF (Cost, Insurance and Freight - cost, insurance and freight) in the edition of Incoterms 2010 are relevant for cargo transported by water by placing goods on board in bulk or in the package. When placing the goods in the container, the seller transfers the goods to the carrier at the terminal, and does not place it on board the vessel, in such cases, according to Incoterms 2010, the term FCA or CIP should be used.

However, the terms FCA and CIP are not used by the vast majority of international trade participants (exporters, importers, freight forwarders, logistics operators, banks). This is because FOB and CIF are two very old terms, Incoterms. For example, FOB was already used in England in the late eighteenth century, and the International Chamber of Commerce published this term in the first edition of the Incoterms rules in 1936.

It is anticipated that the new Incoterms 2020 regulations will allow FOB and CIF delivery terms to be used to transport containers, as was the case with Incoterms 2000 and previous versions. This change is very important for all participants in foreign economic activity, as approximately 80% of world trade is carried out in container packaging.

In addition, changes in insurance obligations between the seller and the buyer are expected in addition to the insurance interests under the terms of CIF and CIP deliveries.

5. New term in Incoterms 2020 - CNI (Cost and Insurance - cost and insurance)

Incoterms 2020 introduces a new term of the terms of delivery - CNI, stands for "Cost and Insurance", translated as "Cost and Insurance", means that the seller made the delivery when the insured goods are placed in the specified port of shipment.

The basis of delivery of CNI will be included in group "C", ie the risk of transportation and damage to the goods will be transferred from the seller to the buyer at the port of departure. But this new Incoterms 2020 rule will allow the seller-exporter to be responsible for international cargo insurance. The CNI delivery terms are designed to fill the gap between FCA and CFR / CIF terms. As mentioned above, the terms of delivery of FSA to Incoterms 2020 will be divided according to the method of delivery, land and water modes of transport. Unlike the FCA term, the CNI delivery terms will include the cost of international insurance at the expense of the exporting seller, and unlike the CFR / CIF will not include freight. It is assumed that the introduction of a new term will be the best solution, as it can be used between FOB and CIF bases.

6. Two new rules in Incoterms 2020, based on the terms of delivery of DDP

In its current form, DDP delivery terms are commonly used for goods such as samples or spare parts that are shipped and delivered by couriers through express delivery companies that handle all customs and logistics procedures to deliver the goods to the buyer's address. The seller-exporter bears all costs associated with transporting the goods to the destination, including customs clearance and payment of customs duties and taxes.

Based on the DDP term (which in turn will be removed), two new DTP and DPP delivery bases will be created:

Terms of delivery DTP Incoterms 2020 (stands for "Delivered at Terminal Paid", translated as "delivery to the terminal with payment of duty") means that the seller is responsible for any transport costs with payment of customs duties and delivery of goods to the terminal (port, airport or logistics center) in the country of destination of the buyer.

The terms of delivery of DPP Incoterms 2020 (deciphered "Delivered at Place Paid", translated as "delivery to the place with payment of duty") means that the

seller is responsible for any transport costs with payment of customs duties and delivery of goods to any place, which is not a transport terminal (for example, at the address of the buyer) [45].

7. The term DAT is renamed to the DPU delivery terms

The DAT (Delivered at Terminal) delivery base has been renamed to Delivered Named Place Unloaded (DPU) delivery terms.

This change was caused by two reasons.

First, there is confusion about the differences between the term DAT (delivery at the terminal) and the term DAP (delivery at destination). The key difference between these conditions is that according to the DAT rule, delivery is made after the goods have been unloaded from the vehicle and delivered to the buyer at the specified terminal. Whereas under the DAP condition, delivery is carried out before the goods are unloaded - when they are provided to the buyer on the arrived vehicle and are ready for unloading.

The second reason for this change was to provide more flexibility in determining the place of delivery of goods. Now the seller and the buyer can agree on any place for delivery of goods, not just in a particular terminal. Terms of delivery of DPU Incoterms 2020 and DAT Incoterms 2010 are otherwise identical in content. The DPU Incoterms 2020 rule is the only term that instructs the seller to unload the goods [46].

Thus, the changes made to Incoterms 2020, although not as large-scale as expected, compared to Incoterms 2010, are a positive moment for organizations that actively use the rules of Incoterms 2010.

Digitalization has a decisive influence on the structure and dynamics of international trade, and accordingly, on the organization of international cargo delivery. This effect is manifested in several aspects.

The first and most obvious is the formation of a new information and communication framework for international trade relations and contracts. Now it is with the help of digital technologies that the interaction of trade participants is carried

out, namely the search for customers, business correspondence, signing contracts, organization of logistics.

The second aspect is the penetration of digital technologies at the household level, namely the more intensive use of electronic money, increasing the share of goods and services that exist only in electronic form.

The third aspect is to increase the share of purchases made online. Previously, this trend applied only to the domestic market and retail sales. Now we can observe a radical restructuring of the organization of trade and the process of international supply of goods to consumers. Previously, the sale of goods took place through a long chain of wholesale intermediaries between the manufacturer and the final buyer. Now, thanks to universal electronic trading platforms, only two participants can remain on the market, namely the online store and the end customer.

2. ANALYTICAL PART

<i>Air Transportation Management Department</i>				<i>NAU.20.03.97 003EN</i>			
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Supervisor:	<i>Yuliia V. Shevchenko</i>				D	42	42
Standards Inspector	<i>Yuliia V. Shevchenko</i>				<i>FTML 275 ОП- 202Ма</i>		
Head of the Department	<i>Shevchuk D. O</i>						

2.1. Analysis of the state and trends of the international transport services market in Ukraine

In the process of international economic relations, the movement of goods, passengers and luggage is provided by various modes of transport. This process is the subject of an international transport operation. In international trade, the process of delivery of goods consists of (Fig.2.1):

–transportation of goods within the exporting country to the border point or port of the country;

–transportation of goods from the border point (port) of the importing country to the point of its consumption within the country;

–transit (through third countries) or sea transport, if the exporting country and the importing country do not have a common border.

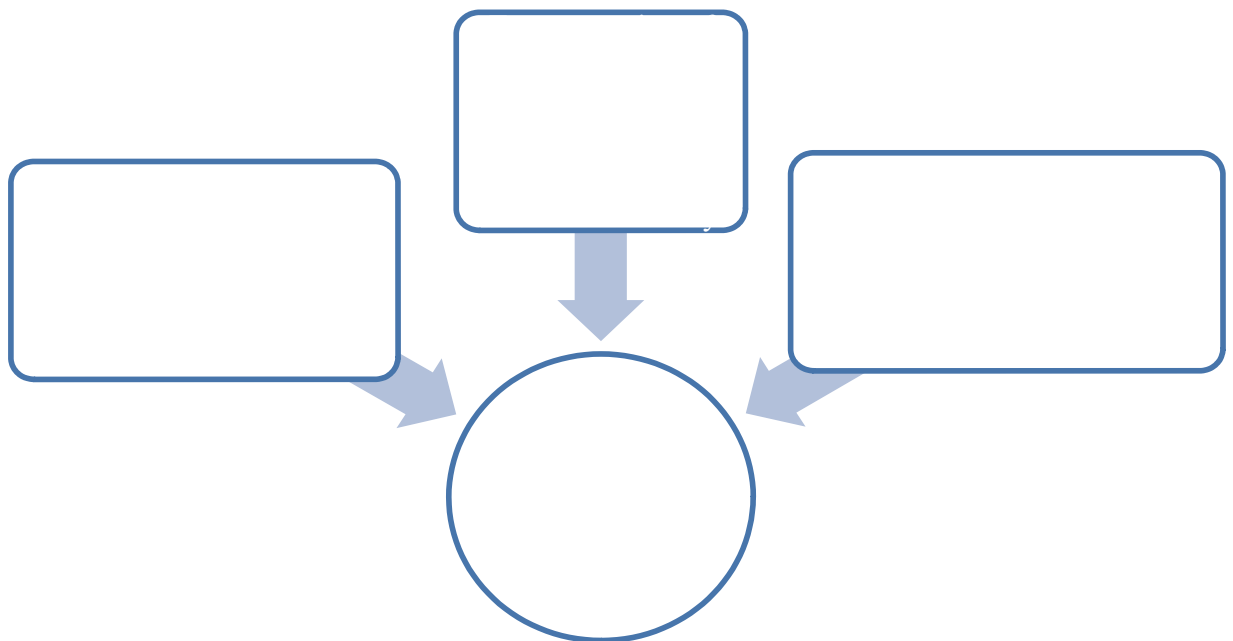


Figure 2.1- Components of the process of delivery of goods in international trade

According to the structure of direct investment in the Ukrainian market (share capital) by type of economic activity "Transport, warehousing, postal and courier activities" in terms of countries as of 31.12.2019 (Fig.2.2), the largest investors in the Ukrainian market transport services (TP) are Cyprus (29.1%), Germany and the Netherlands (13.4% each).

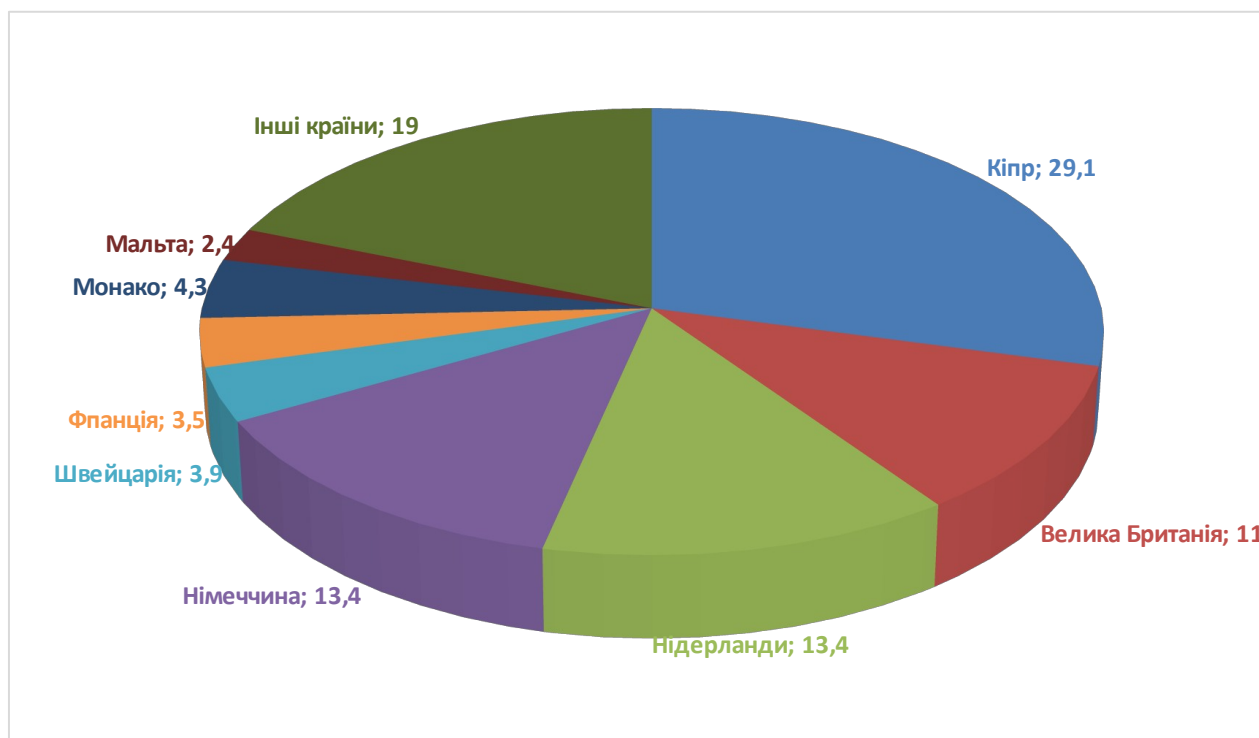


Fig. 2.2. The structure of direct investment (equity) by type of economic activity "Transport, warehousing, postal and courier activities" in terms of countries as of 31.12.2019,%

Source: based on [50]

The average number of full-time employees of enterprises by type of economic activity "Transport, warehousing, postal and courier activities" tends to decrease (Table 2.1). Thus, in 2018, the average number of full-time employees of enterprises in this type of activity was 648.4 thousand people. Compared to 2017, this figure decreased by 1.5%, and compared to 2010 - by as much as 21.4%. However, this reduction in staff was mainly due to the warehousing sector.

The average number of full-time employees of enterprises by type of economic activity "Transport, warehousing, postal and courier activities", thousand persons

Types of economic activity	2010	2014	2015	2016	2017	2018	2019
Transport, warehousing, postal and courier activities	824,3	808,6	731,0	661,4	659,9	655,2	648,4
land and pipeline transport	255,2	258,2	277,5	256,0	271,8	271,8	253,7
water transport	9,6	4,3	3,6	3,8	3,4	2,3	2,6
air transport	11,1	9,5	7,3	6,9	7,1	8,2	8,1
warehousing and ancillary activities in the field transport	443,2	439,8	355,0	315,4	301,0	296,9	309,8
postal and courier activities	105,2	96,8	87,6	79,3	76,6	76,0	74,2
Telecommunications (telecommunications)	113,7	90,2	75,3	60,7	54,5	49,4	45,0

Source: based on [50]

The number of employees in the field of transport services remained almost at the level of 2010, although it decreased by 6.3% compared to the previous two years (Fig. 2.3). It should be noted that the number of people working in the transport sector is growing in the crisis years for Ukraine after Russia's aggression.

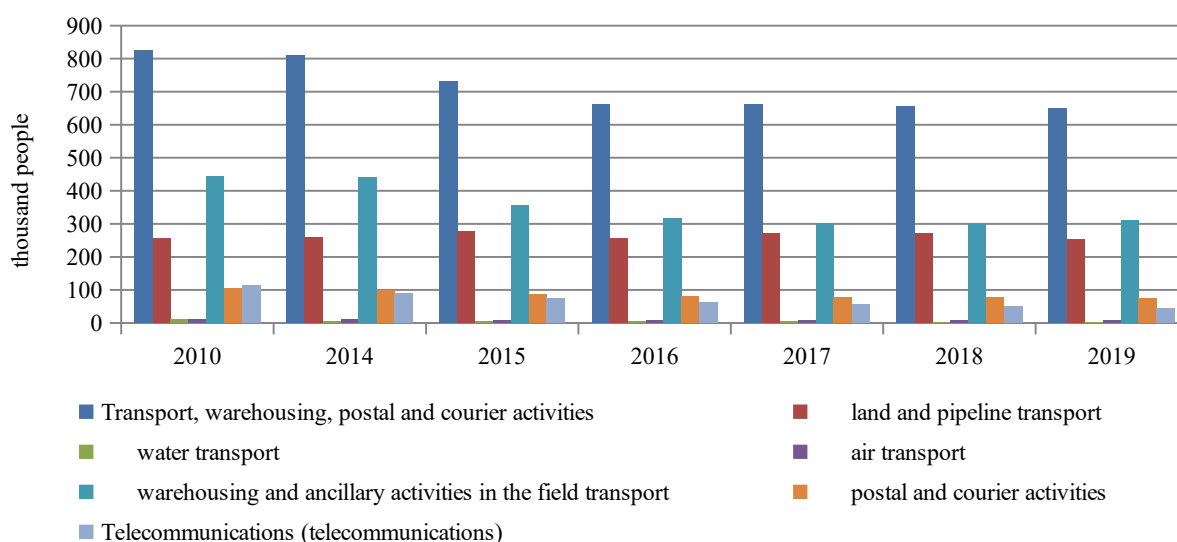


Fig. 2.3. Dynamics of the average number of full-time employees of enterprises by type of economic activity "Transport, warehousing, postal and courier activities", thousand people

Source: based on [50]

At the same time, according to the State Statistics Committee of Ukraine, the average monthly salary in the field of transport and warehousing has a stable upward trend. In 2019, the average salary of full-time employees in this sector of the economy was UAH 9,860, which is 28.3% more than in the previous 2018, and 2.75 times higher than in 2014 before the war (Table 2.2).

Table 2.2

Average monthly salary of full-time employees, UAH

Types of economic activity	2010	2014	2015	2016	2017	2018	2019
Transport, warehousing, postal and courier activities	2658	3589	3768	4653	5810	7688	9860
land and pipeline transport	2355	3163	3541	4172	5265	7183	9187
water transport	2986	3445	3622	5076	6974	7590	10467
air transport	6774	10341	11967	18470	24688	31088	35651
warehousing and ancillary activities in the field transport	2993	4062	4231	5358	6603	8485	10884
postal and courier activities	1523	1915	1934	2180	2818	3851	5044

* Data are given in accordance with the Classification of Economic Activities (DK 009: 2010)

Source: based on [50]

Figure 2.4 shows the characteristics of the average monthly salary of full-time employees of transport, warehousing, postal and courier activities by type of economic activity in 2019.

As can be seen from Fig.2.4, there is a significant gap in the remuneration of workers for different modes of transport, which, in principle, is due to working conditions, the required level of qualification in a particular area and the degree of occupational risk. But wages are still too low, especially in the postal and courier sectors.

And this is a problem that needs to be solved, given the strategic role of the transport sector for the national economy of Ukraine.

According to the State Statistics Committee of Ukraine, more than 25% of enterprises of the activity "Transport, warehousing, postal and courier activities" in

2018 were unprofitable (Table 2.3). Although, it should be noted that compared to 2010, the number of unprofitable enterprises in this type of economic activity decreased by almost 2 times.

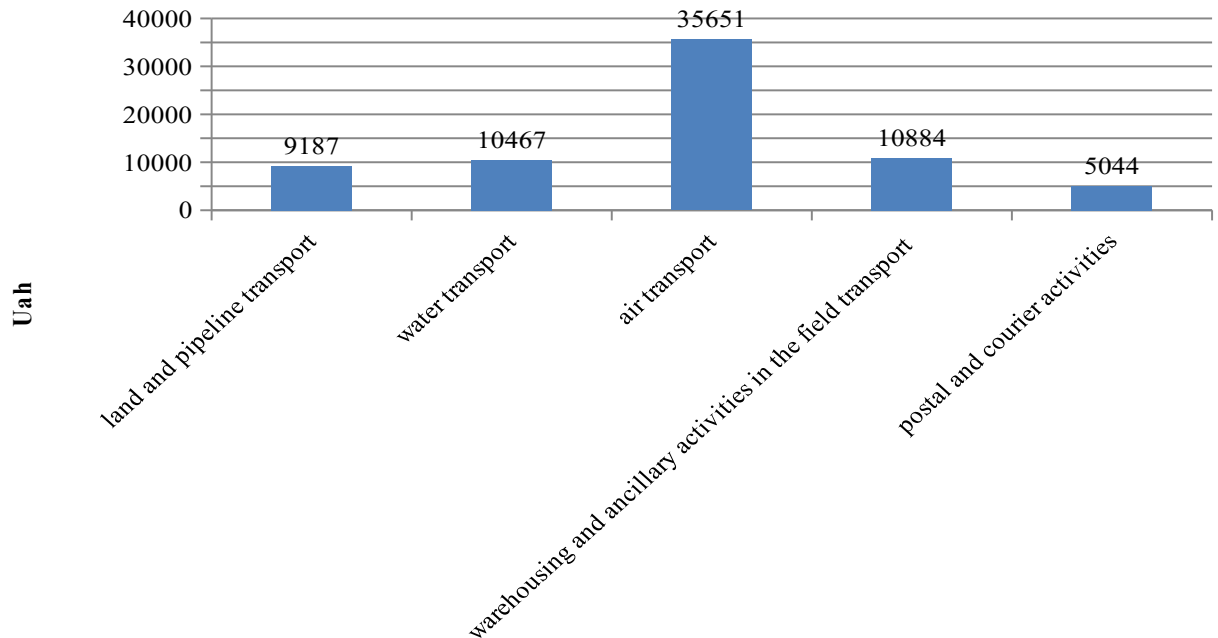


Fig. 2.4. Characteristics of the average monthly salary of full-time employees of transport, warehousing, postal and courier activities by type of economic activity in 2019, UAH

Source: based on [50]

As can be seen from Table 2.4, enterprises operating in the type of economic activity "Transport, warehousing, postal and courier activities", unfortunately, remain unprofitable in terms of their operating activities. Which, frankly, is questionable. There is reason to believe that these indicators of the State Statistics Committee are the result of providing companies with inaccurate information about the results of their activities, in order, first of all, to avoid taxation.

The total volume of exports of transport services in Ukraine in 2018 amounted to 5851423.3 thousand dollars. USA, and imports - 1464807.2 thousand US dollars (Table 2.5).

Table 2.3

Dynamics of financial results of enterprises of the activity "Transport, warehousing, postal and courier activities"

Years	Financial result (balance), UAH million	Profitable enterprises		Enterprises that suffered a loss	
		as a percentage of the total number of enterprises	financial result, UAH million	as a percentage of the total number of enterprises	financial result, UAH million
Transport, warehousing, postal and courier activities					
2010	5058,9	54,6	10387,7	45,4	5328,8
2014	834,3	63,1	9429,9	36,9	8595,6
2015	-19703,9	62,7	12775,3	37,3	32479,2
2016	-13921,8	70,9	23093,7	29,1	37015,5
2017	12819,7	71,7	28278,0	28,3	15458,3
2018	-16532,6	71,5	28509,1	28,5	45041,7
2019	-20732,0	74,1	31581,1	25,9	52313,1
Including postal and courier activities					
2010	36,2	62,3	81,5	37,7	45,3
2014	79,9	71,1	87,2	28,9	7,3
2015	-4,1	66,8	50,6	33,2	54,7
2016	7,8	72,8	91,1	27,2	83,3
2017	-147,4	68,6	81,3	31,4	228,7
2018	-250,1	68,6	33,1	31,4	283,2
2019	-709,2	73,4	74,6	26,6	783,8

Source: [50]

Table 2.4

Profitability of operating and all activities of enterprises by individual types of economic activity (as a percentage)

Years	The level of profitability (loss) of operating activities of enterprises	The level of profitability (loss) of all activities of enterprises
Transport, warehousing, postal and courier activities		
2010	5,6	0,7
2014	3,5	-0,6
2015	-1,7	-9,1
2016	1,1	-4,9
2017	5,1	1,8
2018	-1,0	-3,5
2019	-1,6	-4,0
Including postal and courier activities		
2010	0,9	0,0
2014	2,0	1,2
2015	0,4	-0,6
2016	0,5	-0,2
2017	0,8	-2,0
2018	-1,6	-2,6
2019	-6,0	-6,2

Source: [50]

Table 2.5

Dynamics of export-import of transport services in Ukraine, thousand US dollars

Services	2010	2015	2016	2017	2018	2019
1	2	3	4	5	6	7
Export						
Transport services, which:			5263155,3	5300545,6	5861405,6	5851423,3
off	7835176,2	6101923,5				
maritime transport services	1234311,6	850878,8	735935,8	661619,1	612112,3	523257,5
Air transport	1181929,8	1071262,5	853618,5	882840,3	1091775,1	1221610,7
railway transport	1487123,1	1098830,7	751254,1	561118,6	580897,5	538914,8
road transport	254043,4	459623,7	249071,0	237949,1	273773,7	304438,0
pipeline transport	3357722,5	2207902,0	2258041,9	2630686,4	2998248,4	2959047,5
other additional transport services	221384,0	330069,7	341649,9	262868,2	239941,0	233398,4
postal and courier services	25745,3	33725,3	23702,4	31194,4	30558,8	35769,6
Imports						
Transport services, which:						
off	1178914,9	1376552,3	1153393,5	989274,8	1213073,6	1464807,2
maritime transport services	143070,3	243651,7	191729,0	141180,7	222770,1	222986,3
Air transport	447611,9	431037,6	466937,6	357465,0	452397,3	695720,1
railway transport	463495,6	431305,2	287002,5	259877,0	297715,4	282974,7
road transport	108526,9	189804,7	91845,4	114860,7	132793,4	142892,5
pipeline transport	600,4	52588,0	98123,3	87229,5		
other additional transport services	10180,2	15717,7	11332,6	20863,9	16592,6	23396,7
postal and courier services	4214,8	11359,7	5791,2	7446,9	10521,4	17163,9

Source: [50]

In 2019, compared to 2018, there was a slight decrease in exports of transport services (by 0.2%), while the volume of imports of transport services increased by 20.8%. Compared to 2010, transport services exports decreased by 25.3%, while imports, on the contrary, increased by 24.3% (Fig. 2.5).

According to the State Statistics Committee of Ukraine, in the structure of export-import operations, despite the decrease in TS exports, a larger share in the

overall structure of export-import TSs belongs to export supplies (80%), which is definitely a positive factor. (Fig.2.6).

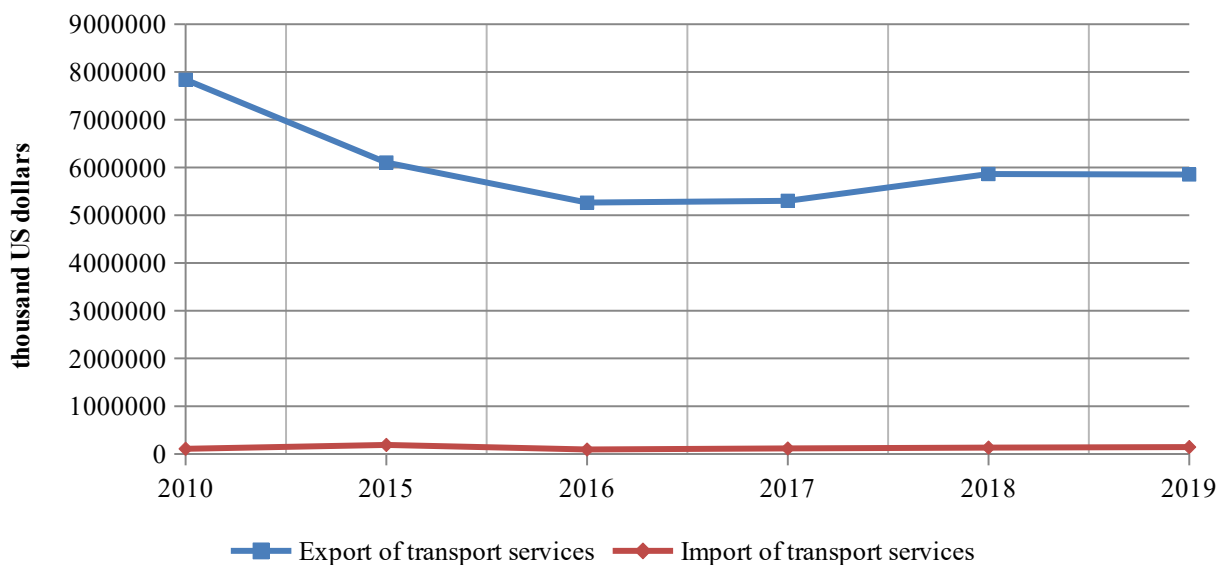


Fig. 2.5. Dynamics of exports and imports of transport services in Ukraine, thousand US dollars

Source: compiled by author based on [50]

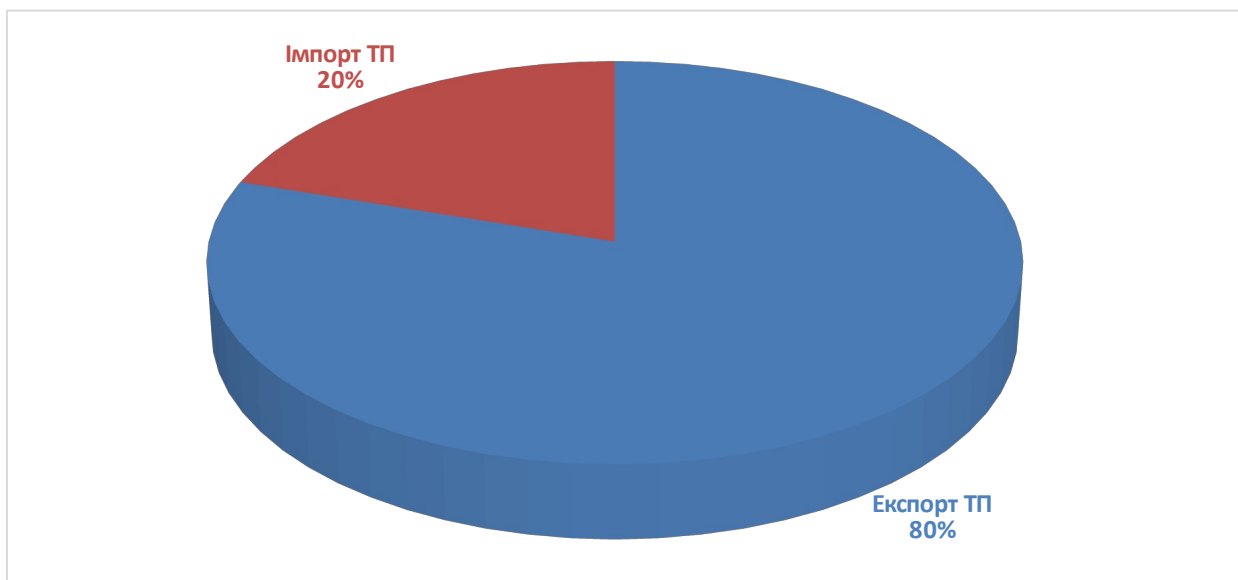


Figure 2.6 - Structure of export-import transport services of Ukraine with the countries of the world for 2019

Source: compiled personally based on [50]

According to the results of the analysis of the structure of export-import transport services of Ukraine for 2019 it can be concluded that, despite the war with Russia, more than half of export transport services (53.6%) Ukraine provides with the Russian Federation (Fig.2.7) . Russia also accounts for 10% of imports of transport services (Fig. 2.8).

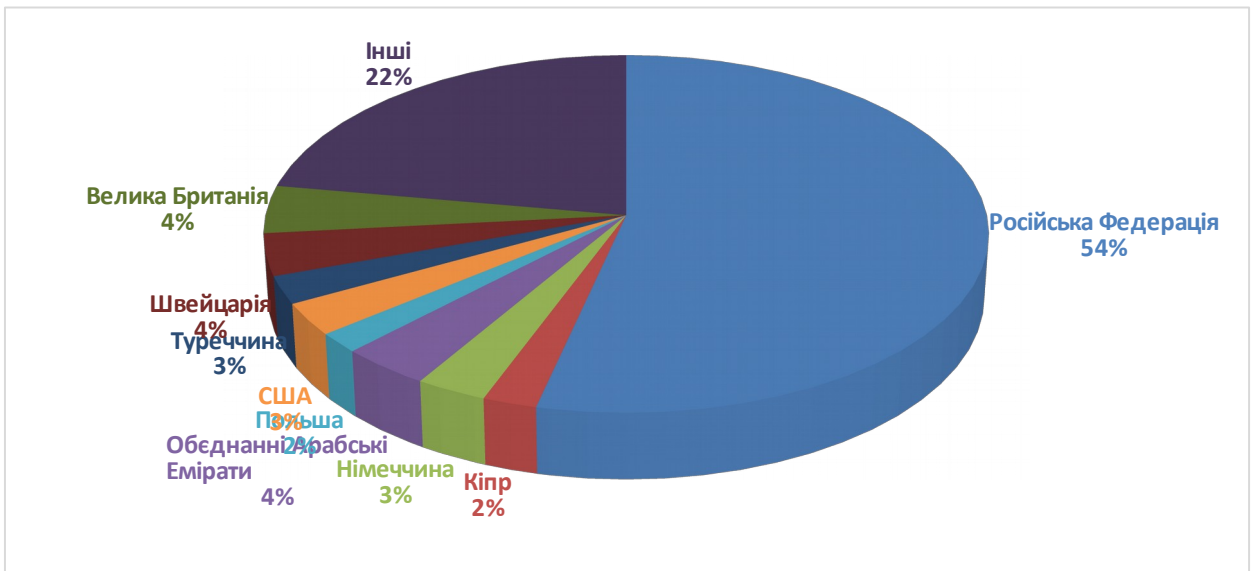


Fig. 2.7. Structural analysis of exports of transport services of Ukraine by countries, 2019

Source: compiled by author based on [50]

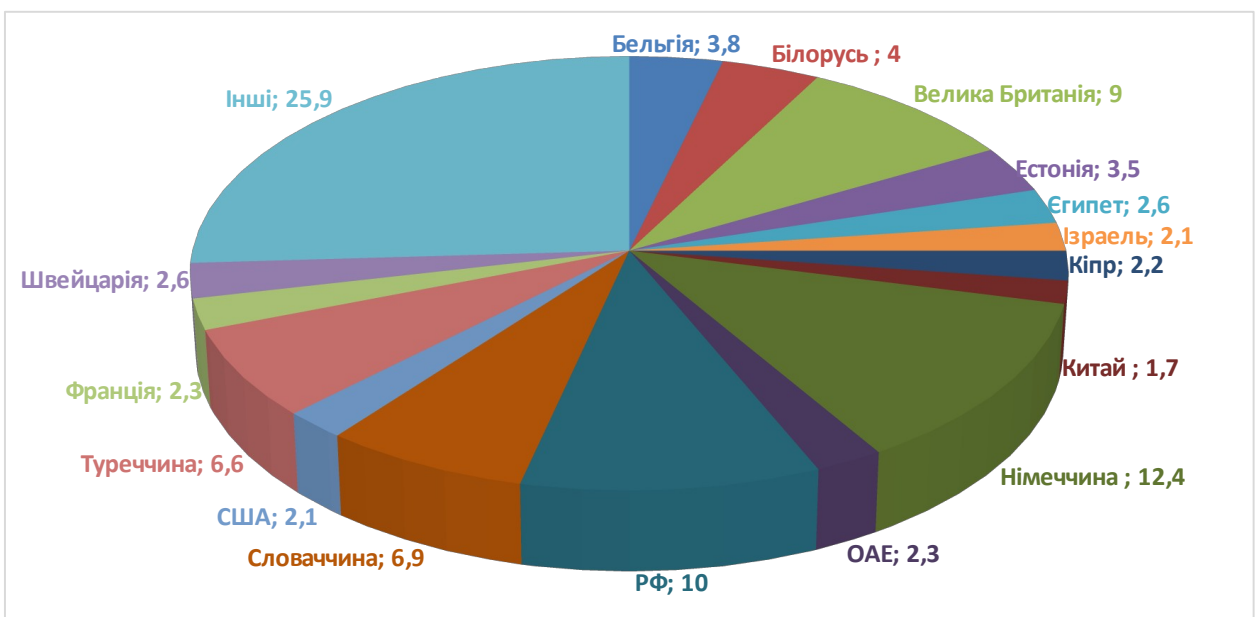


Fig. 2.8. Structural analysis of imports of transport services from Ukraine by countries, 2019

Source: compiled by author based on [50]

In 2019, in the structure of exports, most transport services were delivered to the United Kingdom (4.3%), Switzerland (3.8%), the United States (2.9%), Germany (2.9%), and Turkey (2.5 %), Cyprus (2.2%), Poland (1.8%). All other countries accounted for 22.3% (Fig. 2.8).

The largest volume of transport services in 2019 in Ukraine was delivered from Germany (12.4%). In second place was the United Kingdom (9%), in third place - Slovakia (6.9%), and in 4th place - Turkey (6.6%). Slightly more than 3% of the structure of imports of transport services fell on countries such as Belgium and Estonia.

China in the structure of export-import transport operations, occupies a very small share (respectively 0.9% in exports and 1.7% - in imports of transport services).

In terms of tonne-kilometres (tkm), European road freight transport increased by 4.5 % from 2018 to 2019. In 2019, the European road freight transport was the highest recorded over the last 5 years: it increased by 11.8 % from 2015 to 2019 (see table 2.6 and fig. 2.9).

National transport in the EU, representing 63.5 % of total transport, recorded a 9.9 % increase from 2015 to 2019, while cross-trade and cabotage transport, representing 12.1 % of total transport, recorded a high and continuous increase of 38.5 % over this period.

EU-28 national and international road freight transport, covering goods loaded and unloaded, increased from 2018 to 2019 by 3.5 % and 4.6 % respectively. Cross-trade and cabotage both recorded substantial growth, of 8.5 % and 17.1 % respectively (see table 2.6).

In 2019, Poland (17.5 % of EU total tkm) reconfirmed its position as one of the most significant countries for road transport in Europe. Lithuania (26.2 %), Cyprus (17.5 %), Greece (15.5 %) and Poland (15.3 %) were the Member States recording the highest rise in tkm performed from 2017 to 2018, while at the other end of the

scale, Belgium registered a substantial decline (-13.4 %), followed by Czechia (-12.0 %) and Estonia (-7.8 %).

Table 2.6

1. Road freight transport by type of transport, 2018-2019 (million tonne-kilometres) [<https://eurotrade.net.ua/>]

	2018					2019					Growth rate 2018-2019 (%)				
	National	Internat.	Cross-trade	Cabotage	Total	National	Internat.	Cross-trade	Cabotage	Total	National	Internat.	Cross-trade	Cabotage	Total
EU-28	1 173 358	446 780	171 837	38 535	1 830 519	1 214 200	467 335	186 457	45 124	1 913 116	3,5	4,6	8,5	17,1	4,5
Belgium	18 808	9 560	1 123	1 373	30 865	16 353	8 443	926	1 019	26 741	-13,1	-11,7	-17,5	-25,8	-13,4
Bulgaria	7 324	11 306	14 203	2 576	35 409	8 328	10 182	14 477	2 163	35 150	13,7	-9,9	1,9	-16,0	-0,7
Czechia	22 304	22 017	5 007	986	50 315	21 899	18 223	3 537	614	44 274	-1,8	-17,2	-29,4	-37,7	-12,0
Denmark	13 037	2 397	416	245	16 094	12 577	2 395	314	216	15 502	-3,5	-0,1	-24,5	-11,8	-3,7
Germany	271 679	38 980	3 500	1 614	315 774	271 666	36 558	3 265	1 660	313 149	0,0	-6,2	-6,7	2,9	-0,8
Estonia	1 792	2 815	1 610	499	6 716	1 631	2 711	1 504	344	6 189	-9,0	-3,7	-6,6	-31,1	-7,8
Ireland	9 281	1 744	347	244	11 616	9 326	1 702	504	304	11 836	0,5	-2,4	45,2	24,6	1,9
Greece	15 191	9 308	60	0	24 560	15 471	12 858	48	0	28 377	1,8	38,1	-20,0	0,0	15,5
Spain	144 984	65 594	4 046	2 372	216 997	154 666	69 501	4 160	2 781	231 109	6,7	6,0	2,8	17,2	6,5
France	144 205	11 128	261	249	155 843	155 876	11 259	274	282	167 691	8,1	1,2	5,0	13,3	7,6
Croatia	3 986	4 939	2 360	52	11 337	4 199	4 978	2 496	161	11 834	5,3	0,8	5,8	209,6	4,4
Italy	100 282	11 553	300	502	112 637	106 711	11 899	612	465	119 687	6,4	3,0	104,0	-7,4	6,3
Cyprus	684	19	-	-	703	802	24	-	-	826	17,3	26,3	-	-	17,5
Latvia	2 807	6 026	4 577	817	14 227	3 240	6 235	4 469	1 029	14 972	15,4	3,5	-2,4	25,9	5,2
Lithuania	2 970	10 636	15 963	1 404	30 974	3 184	12 422	20 926	2 567	39 099	7,2	16,8	31,1	82,8	26,2
Luxembourg	1 192	2 922	3 468	1 741	9 324	1 211	3 001	3 580	1 622	9 414	1,6	2,7	3,2	-6,8	1,0
Hungary	11 720	15 426	11 710	1 146	40 002	11 940	16 337	10 180	1 227	39 684	1,9	5,9	-13,1	7,1	-0,8
Malta (1)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Netherlands	34 053	27 812	3 952	1 962	67 779	33 008	28 246	4 313	1 947	67 513	-3,1	1,6	9,1	-0,8	-0,4
Austria	16 505	7 476	1 670	488	26 138	16 803	7 314	1 383	479	25 978	1,8	-2,2	-17,2	-1,8	-0,6
Poland	106 634	118 106	53 037	12 972	290 749	120 036	135 567	61 720	17 897	335 220	12,6	14,8	16,4	38,0	15,3
Portugal	10 382	16 694	6 493	1 308	34 877	10 854	15 579	6 412	1 341	34 186	4,5	-6,7	-1,2	2,5	-2,0
Romania	13 140	16 133	15 864	3 038	48 176	13 548	17 565	19 669	3 921	54 704	3,1	8,9	24,0	29,1	13,6
Slovenia	2 134	8 341	7 296	936	18 707	2 310	9 031	8 413	1 059	20 814	8,2	8,3	15,3	13,1	11,3
Slovakia	5 697	15 115	13 879	1 447	36 139	6 326	15 001	12 698	1 386	35 411	11,0	-0,8	-8,5	-4,2	-2,0
Finland	24 586	1 641	369	249	26 846	26 330	1 281	155	201	27 966	7,1	-21,9	-58,0	-19,3	4,2
Norway	18 514	2 389	4	4	20 910	18 741	2 640	1	4	21 385	1,2	10,5	-75,0	0,0	2,3
Switzerland	10 138	1 483	295	217	12 134	10 264	1 427	136	153	11 980	1,2	-3,8	-53,9	-29,5	-1,3

Seven EU Member States (Spain, France, Croatia, Lithuania, Poland, Romania and Slovenia) registered increases in all transport types, with rises ranging between 4.4 % and 26.2 % in total transport. Croatia, Sweden and Lithuania recorded very strong growth for cabotage. In cross-trade transport, Italy, the United Kingdom and Ireland experienced considerable increases.

Among other countries with a large road transport industry, France, Spain and Italy saw rises ranging from 6.3 % to 7.6 %, driven by important increases in national transport, while Germany and the United Kingdom reported decreases of 0.8 % and 0.7 % respectively, due to decreases in national or international transport.

In terms of tonnage, European road freight transport continued to increase in 2019 for the fourth consecutive year (2.8 % compared with 2017), reaching the highest value since 2015.

In 2019, 'metal ores and other mining and quarrying products' was the largest product group terms of tonnage, accounting for 3 635 million tonnes and a share of 24.8 % in terms of tonnage. Other important product groups were 'food, beverages and tobacco' (12.4 %), 'other non-metallic mineral products' (11.8 %) and 'agricultural products' (9.0 %). In terms of tonnage, the highest rises between 2017 and 2018 were recorded for coal, lignite, crude petroleum and natural gas' (15.4 %), textiles, textile products, leather and leather products (10.9 %) and grouped goods (7.1 %). 'Machinery and equipment' (4.4 %) saw the highest decrease over the same period, after several consecutive increases in the previous year's.

In 2018, food products, beverages and tobacco' dominated the transport when measured in tonne-kilometres, accounting for 329 billion tkm. The share of 'food products, beverages and tobacco' in the total road freight transport in tkm was 17.2 %, followed by 'agricultural products' (10.8 %), 'grouped goods' (10.3 %) and 'other non metallic mineral products' (7.7 %).

The main factors that hinder or slow down the development of competencies for the digitization of business models in the transport and logistics industry, according to surveys of managers of transport and logistics companies conducted by PwC (respondents could choose three answers), are (Fig.2.10):

- significant needs for financial investments, 38%;
- unresolved issues related to data security and confidentiality, 38%;
- lack of a clear program for the development of digitalization and support / initiative from senior management, 33%;
- staff shortage, 26%;
- slow spread of basic infrastructure technologies, 23%;
- business partners do not have the opportunity to participate in the joint development of digital solutions, 22%;
- lack of clear understanding of the economic benefits of investing in digitalization, 21%;
- lack of digital standards, norms and certification, 17%;
- concerns about the loss of control over the company's intellectual property, 15%.

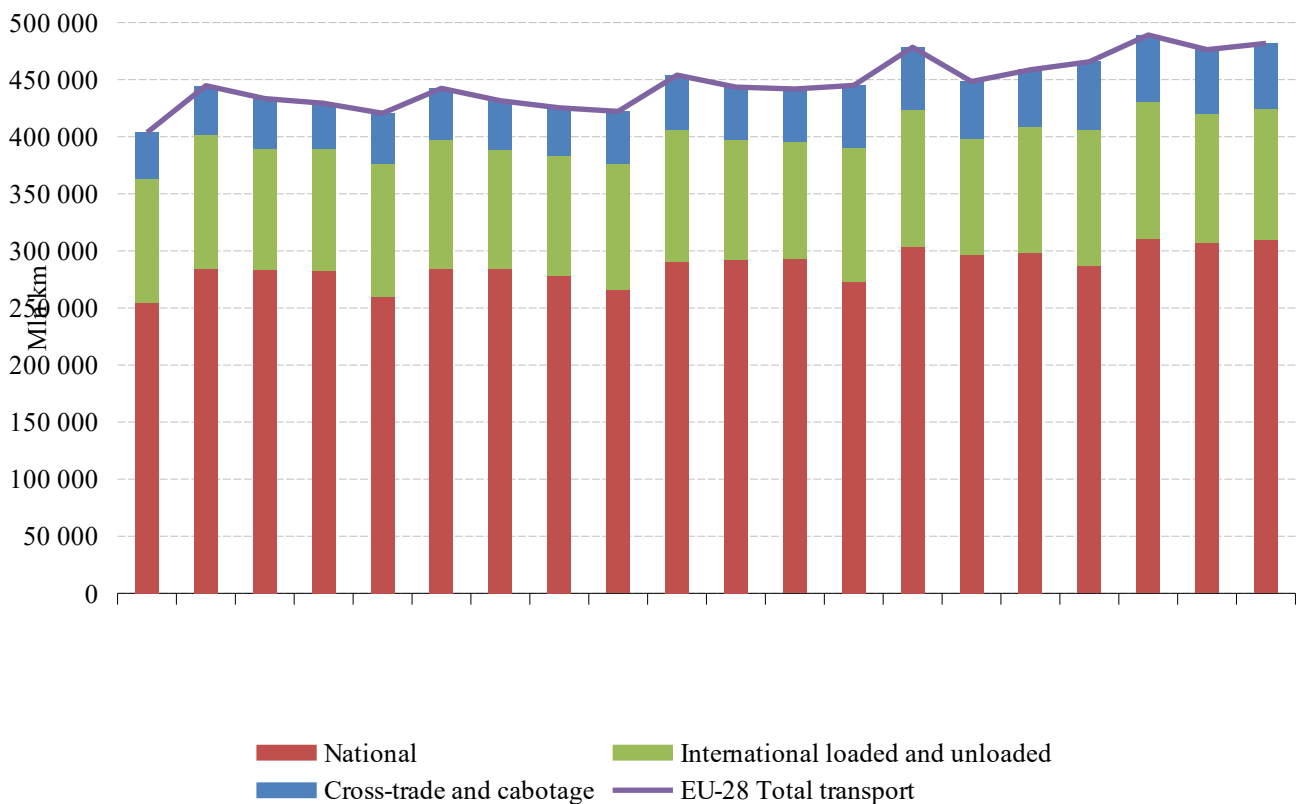


Fig. 2.9. Quarterly road freight transport by type of transport, EU-28, 2015-2019

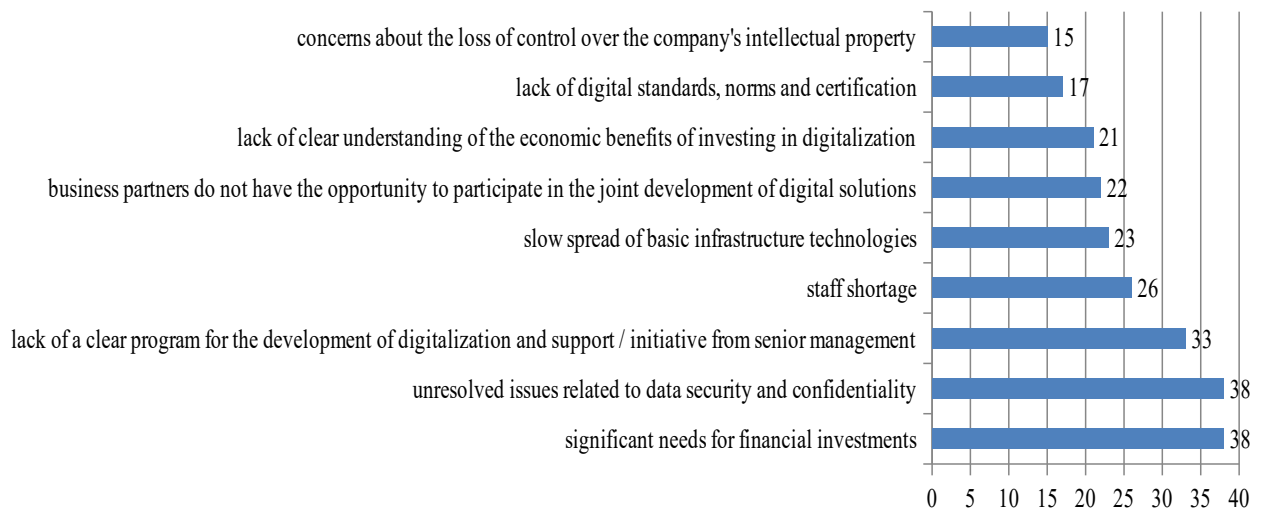


Fig. 2.10. Factors that hinder or slow down the development of competencies for digitization of business models in the transport and logistics industry

Source: compiled by author based on [68]

Digitization is still a challenge for transport and logistics companies. In no other industry does the vast majority of industry experts attach as much importance to data processing and analysis systems over the next five years as in the transport and logistics services sector: here the figure is 90% compared to the average for all other industries 83%. [68]. Today, transport and logistics companies have access to unprecedented amounts of data. In this area there are ample opportunities to improve efficiency and quality of customer service. Logistics service providers, which are an important part of an integrated digital value chain, can significantly improve the accuracy of route planning and order forecasting to quickly scale or increase the resources required.

They also help increase flexibility and scalability, standardize and harmonize processes throughout the organization. The effects of these technologies listed above are particularly relevant for those logistics service providers and transport services that have grown through the acquisition of other companies and now use disparate systems. The potential of new technologies for logistics is huge, but now companies in the industry are in no hurry to implement it. In a recent PwC study on the concept of Industry 4.0, the share of transport and logistics companies that assess their current level of digitalization as "advanced" was 28%. Some customers of the transport and

logistics industry have long passed this stage: 41% of companies in the automotive industry and 45% of companies - manufacturers of electronics already consider themselves advanced users of new technologies. Thus, the most pressing challenge for companies in the sector is the lack of digital culture and appropriate training. The next few years will be crucial: those who do not catch up now will be forever behind.

2.2. Assessment of the competitive situation in the Ukrainian market of international cargo delivery

There are many companies on the Ukrainian market that provide international cargo delivery services. The nature and range of their activities are very different. These are powerful international transport and logistics companies (DHL, Kuehne + Nagel), and domestic transport and logistics companies ("Delivery", "Zammler", "Ecole Ukraine"), many ordinary freight forwarding companies and specialized delivery services. Let's try to find out what is the difference and what are the competitive advantages of delivery services that are represented in Ukraine and offer, including services for international delivery of goods.

The study was conducted on the basis of a questionnaire survey of online stores that constantly use different delivery services.

The questionnaire, in particular, included questions aimed at finding out which delivery services are used by online stores and to what extent. Delivery services were rated on a ten-point scale. As a result, 120 owners of online stores told about their experience of cooperation with delivery services. In addition, the study assessed the capabilities of services and compared the price of their services.

As expected, the most popular was the delivery service Nova Poshta. It is used by 97% of respondents, which is almost three times higher than the result of its closest competitor - Ukrposhta (33%). The least popular were Zruchna (3%) and Delfast (0.8%) (Fig. 2.11) [47].

Nova Poshta has also become the leader in the share of goods that online stores send with delivery services (64%). Ukrposhta took the second place with a huge gap (8% of the market). At the bottom of the rating - Autolux (0.9%) and Delfast (0.1%) (Fig.2.12).

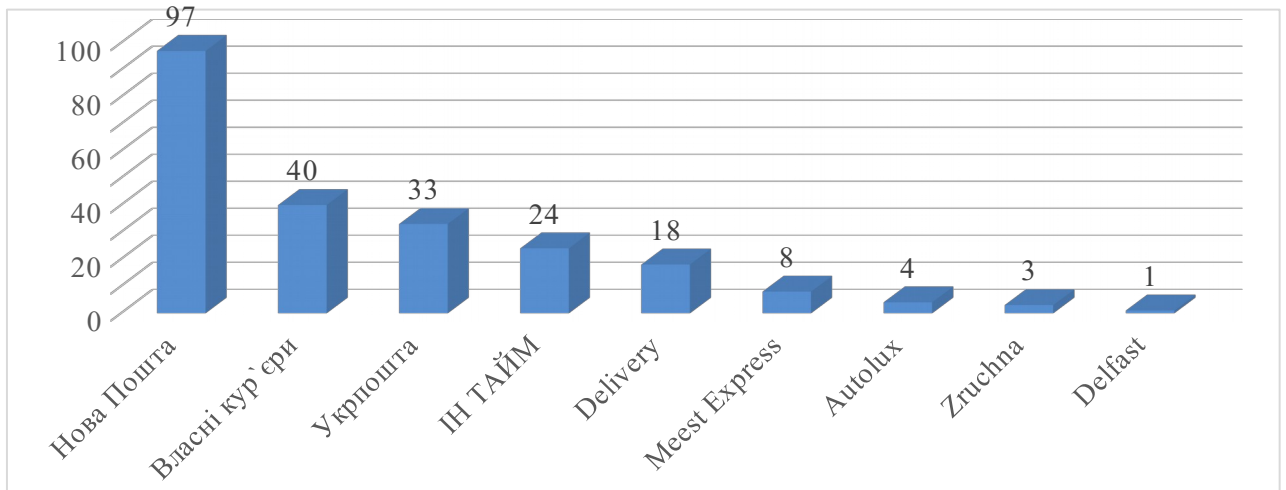


Fig. 2.11. The level of popularity of delivery services in Ukraine among consumers of online stores

Source: based on [47]

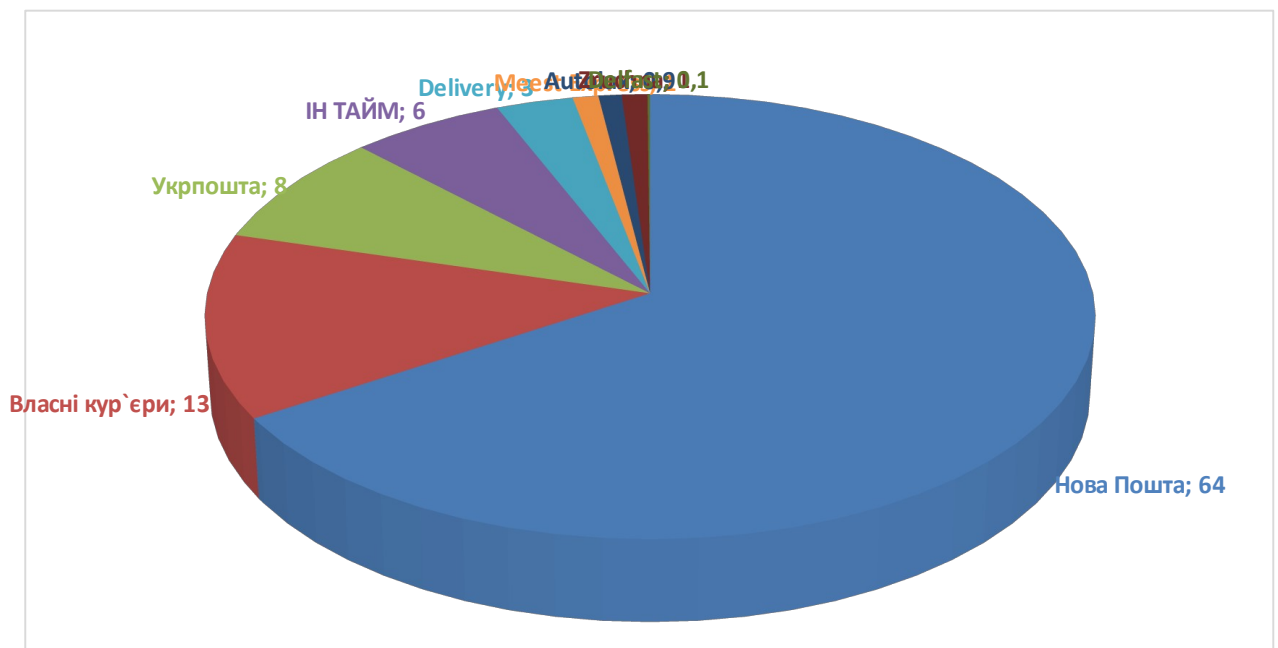


Fig. 2.12. The share of delivery services in the volume of goods they send from online stores, %

Source: based on [47]

Unfortunately, the average rating obtained by the delivery services based on the results of the surveys cannot be considered objective enough, as it was directly influenced by several ratings made by the company. And in this case, different companies were evaluated by different numbers of consumers. Thus, in particular, the delivery service Nova Poshta received the highest score (8.45), according to the evaluation of 118 respondents. The Delfast service received the fewest points (3.47). But this company was evaluated by only 17 respondents (Fig. 2.13) [47].

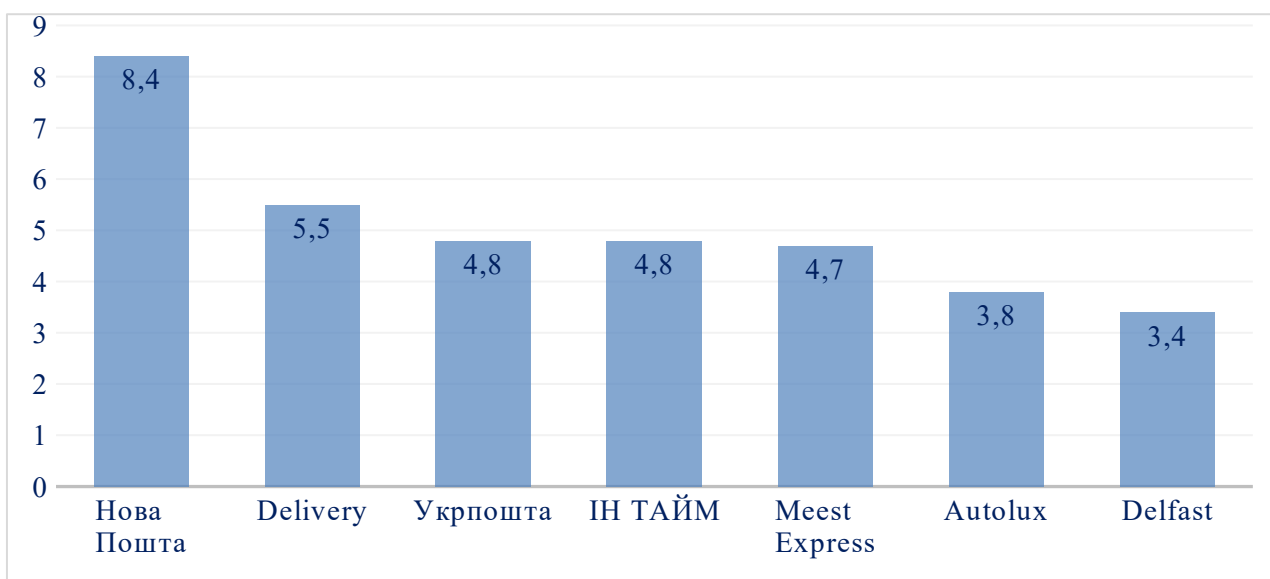


Fig. 2.13. The results of the evaluation of delivery services by consumers of online stores, points

Source: based on [47]

According to the results of the surveys, estimates of different delivery services were obtained according to different criteria. It is clear that these assessments were significantly influenced by the popularity factor of a company, but these are the results of real surveys and therefore they deserve attention. In the table. 2.7 presents the main results of research that highlight the competitive advantages and weaknesses of each of the companies.

The study of public information about companies posted on their official websites allowed to make a comparative table 2.8.

**The results of surveys of consumers of online stores on the quality of
evaluation of services of various delivery services**

Company	Number of respondents, persons	Strengths	Weak sides
Nova Pochta	62	<ul style="list-style-type: none"> ➤ fast delivery (33 answers); ➤ wide network of branches (22 answers); ➤ convenient automation and integration with various services (9 answers) ➤ Fulfillment service 	<ul style="list-style-type: none"> ➤ high cost of services (28 answers)
Ukrpochta	43	<ul style="list-style-type: none"> ➤ low price (17 answers) 	<ul style="list-style-type: none"> ➤ slow delivery (15 answers); ➤ poor service (9 answers); ➤ inconvenient online office (2 replies)
Intime	23	<ul style="list-style-type: none"> ➤ low prices (8 answers) ➤ Fulfillment service 	<ul style="list-style-type: none"> ➤ inconvenient location of offices (10 answers); ➤ sloppy cargo delivery (5 replies)
Delivery	9	<ul style="list-style-type: none"> ➤ one of the lowest prices on the market (3 answers) 	<ul style="list-style-type: none"> ➤ not enough offices (4 answers); ➤ periodic problems with cargo delivery (2 answers)
Autolux	8	<ul style="list-style-type: none"> ➤ relatively low prices (2 answers) 	<ul style="list-style-type: none"> ➤ small number of offices (6 answers);
Meest Express	7	<ul style="list-style-type: none"> ➤ relatively low prices (1 answer) 	<ul style="list-style-type: none"> ➤ insufficient number of offices (3 answers); ➤ poor service (3 answers)

Source: based on [47]

According to point 2.8, almost all companies, except Delfast and Zruchna, in addition to delivery of goods in Ukraine, also offer international delivery services. Although, unfortunately, there is no more specific information on the terms of international delivery in different directions (cost, price) in open access. Which significantly limits access to this service for a significant number of consumers.

The most extensive branch network is in Ukrposhta (over 12,800 branches throughout Ukraine) and the Meest Express (2,578 offices).

Delfast closes the ranking, as it has only six offices, and Zruchn (3 branches). But Delfast and Zruchna have their own characteristics, they are engaged in address delivery, so they do not need many offices. And the speed of delivery of goods in them is an order of magnitude higher than in other services (Delfast delivers parcels in Kiev on electric bicycles, and Zruchna delivers orders in Kiev, Kharkov and the Dnieper, as well as between these cities).

Table 2.8

Comparative characteristics of services provided by delivery services in Ukraine

Parameters	Nova Pochta	Ukrpochta	In time	Meest Express	Delivery	Delfast	Autolux	Zruchna
Number of offices	2440 more	12800	645	2578	1800	6	200	3
Delivery times across Ukraine	1-2 days	1-6 days	1-2 дня	1-3 days	1-3 days	hours	1-3 days	1 day
Availability of a mobile application	+	+	+	+	+	+	+	-
API	+	+	+	+	+	+	+	+
Loyalty program	+	+	-	-	+	-	+	-
International delivery	+	+	+	+	+	-	+	-
Fulfillment	+	-	+	-	-	-	-	+
Sending multiple items to choose from	-	-	+	-	-	-	-	+
Delivery at time intervals	+	-	+	-	+	+	+	+
Transportation of bulky goods	+	+	+	+	+	+	-	+

Source: based on [47]

Ukrposhta delivers the longest parcels (4-6 days), although it has an express delivery service that can handle delivery in just 1-2 days. In addition, Ukrposhta, like its main competitor Nova Poshta, has its own Internet service for customers, which today is undoubtedly a significant competitive advantage. On the Ukrposhta website, through a "personal account", customers can quickly and conveniently arrange international shipments for delivery to one of the 234 countries around the world. The consumer is given the opportunity to create all accompanying documents for

international shipments, including customs declarations, in addition to the service functionality in the test mode. In addition, the customer can calculate tariffs online based on the current exchange rate of the NBU and get a barcode that can be used to track the delivery of goods.

Customers who want to send a small package (up to 2 kg) or a parcel (up to 10 kg) to other countries only need to register in the "personal account" on the Ukrposhta website and draw up the necessary documents. In addition, customers who register shipments online will receive an additional 5% discount from Ukrposhta, which motivates consumers to overcome their stereotypes and move to a new online format of cooperation with the delivery service of their cargo.

In 2018, only 15 offices in Kyiv offered a service outside the next shipment for those customers who placed an order through a "personal account". The list of offices gradually increased, and from October 1, 2019, all automated offices of Ukrposhta across the country offer such a service to their customers. Over time, Ukrposhta customers will also be able to register parcels up to 30 kg in their "personal account". Each new Internet service is launched first in test mode in order to debug the process and eliminate at the stage of implementation of possible risks of its implementation. Ukrposhta plans to constantly expand the functionality of its "personal account", which will provide an opportunity to improve export operations and gradually occupy all new market segments in the international market of transportation and cargo delivery [54].

Now let's analyze a number of important parameters of the delivery services in Ukraine, which offer export-import services. This is, first of all, their manufacturability and loyalty programs.

Delivery services that work with online stores are quite technological: everyone has an API and almost everyone has a mobile application (except Zruchna).

As for loyalty programs, for the use of Nova Poshta's online services, the company charges money to the bonus account and gives additional days of cargo storage. Ukrposhta has a program "Happy Hours" (customers can send parcels with a 10% discount from 19.00 to 21.00 on weekdays).

In the Delivery service you can accumulate points and then use them to pay for services at the rate of 10 points = 1 UAH. And Autolux gives the opportunity to exchange points for one-time discounts and valuable prizes [47].

More and more delivery services offer online stores a fulfilment service, that is, the company takes on not only delivery, but also storage, packaging of goods, and also sends the customer a notice of shipment. In addition, the service processes payments and transfers money to the account of the online store. Such services are provided by Nova Poshta, Intime and Zruchna. And this, of course, is their competitive advantage.

In addition to the fulfilment service, delivery services provide a number of other services. For example, send several products of your choice, in order to reduce the risk of not guessing the size of the product. Unfortunately, this service is provided only by delivery services for online stores Intime and Zruchna.

The service of delivery on time intervals becomes more and more popular. Thanks to this service, the customer has the opportunity to choose the time interval for receiving delivery. This function was implemented by all delivery services, except for Ukrposhta and Meest Express.

However, today one of the most important criteria when choosing a service is the cost of delivery. The size of tariffs depends on many factors, in particular, on weight, dimensions and distance between destinations. Almost every company on its official website offers a calculation of the approximate cost of international delivery of goods to the customer. If desired, you can make a comparison.

The most clear and accurate is the service cost calculator offered by Nova Poshta. But, unfortunately, not all companies that provide international delivery services according to Table 2.8 offer such a cost calculator. In particular, the company "Delivery" offers the calculation of the cost of transportation only within Ukraine, although the portfolio of its services includes export and import services.

According to research contained in the review of Ukrainian delivery services, it turned out that small goods within Ukraine are cheaper to transport services Ukrposhta (26 UAH) and Autolux (27 UAH). Medium - Delivery (46 UAH) and

Meest Express (75 UAH). And for large ones it is cheaper to use Ukrposhta (UAH 123) and Intime (UAH 235.5) [47]. The most expensive transportation of small cargo will cost in the services of Meest Express (52 UAH) and Nova Poshta (40 UAH). Medium - in Ukrposhta (UAH 94) and Intime (UAH 94). And for the delivery of bulk cargo will take the most delivery service Meest Express (975 UAH) [47].

The market leader Nova Poshta has a reputation for service with inflated prices. It also turned out that with Ukrposhta, which is known as the cheapest delivery service to Ukraine, it is relatively expensive to send medium-sized parcels.

As for the cost of international deliveries, the situation is similar to domestic deliveries. Only minor deviations are possible. Unfortunately, not every company offers a calculator for calculating international deliveries, but the pricing policy of the analyzed companies is almost identical for both domestic and international traffic.

Let's try to compare the calculations of the cost of international delivery of goods from Kiev to Germany, which offer "Nova Poshta" and "Ukrposhta" (Table 2.9).

Table 2.9

Comparative calculation of the cost of international delivery of goods from Kiev to Germany

Company	Cargo weight	Dimensions	Cost of services	
Nova Pochta	3 kilos	17x12x10	UAH 2,200 (delivery in 4 days)	1400 UAH (delivery in 6 days)
	10 kilos	60x35x29	4 700 UAH (delivery in 4 days)	3 800 грн. (delivery in 6 days)
Ukrpochta	Less than 10 kilos		\$ 15 + \$ 2.6 for each kg	
	More than 10 kilos		\$ 20 + \$ 2.0 per kg.	

Source: compiled by author based on [51.55]

According to Table 2.9, the cost of Ukrposhta's services for international delivery of goods weighing up to 10 kg. will be much lower than Nova Poshta offers. But, unfortunately, Ukrposhta offers its calculation on the site without taking into

account the dimensions of the cargo and delivery times, which indicates a lack of transparency in pricing policy.

Ukrposhta's new marginal tariffs for universal postal services will generally reduce the cost of sending parcels within Ukraine and for a number of major countries that are key to international shipments.

For Ukrposhta, in order to consolidate its competitive advantages, it was important to equalize distortions in tariffs. Therefore, the company's tariff policy is gradually simplified and reduced to a single logic. In particular, the cost of sending parcels from 3 kg until recently was uncompetitive and high. Currently, Ukrposhta's tariffs are the most affordable on the market of postal and logistics services in all weight categories. And the renewal of zoning for international shipments will provide an opportunity to develop important for customers key areas of international delivery. In addition, for customers who send international parcels weighing up to 10 kg, for example, in the US, China, Australia, Ukrposhta's tariff is also reduced in the most popular weight from 6 to 10 kg. [55].

The increase in marginal tariffs for universal postal services for international delivery applies only to letters and parcels. Thus, the decision of the Ukrposhta leads to a single price level of two essentially identical products for international delivery: a parcel up to 2 kg and a small package up to 2 kg. At the same time, the tariff for sending a small package does not increase [55].

Regarding tariffs for international parcels, the price will change only for parcels up to 10 kg. In particular, tariffs for sending parcels to major countries have been reduced in volume. For example, the cost of sending a parcel by air to the United States and Canada weighing 5 kg decreased by \$ 0.2. US, weighing 10 kg - by 6.8 dollars. USA. The tariff for international parcels from 10 to 30 kg will not change. It was reduced for key countries from August 1, 2017 - in the US, Canada, Australia, China, Russia to 23%. For Kazakhstan, Lithuania, Latvia, Moldova and Georgia, Ukrposhta has introduced a special tariff for regular senders 40-50% cheaper than the standard one. There is also a 5% discount for using the API and "personal account".

Also for regular senders at the conclusion of the contract will be a discount for the amounts that are calculated individually [55].

Thus, Ukrposhta's tariff for international delivery will remain the lowest and provides delivery under a simplified customs procedure from Ukraine to any settlement in 234 countries. And this is the main competitive advantage of Ukrposhta [54]

The main competitive advantage of Nova Poshta in the market of international deliveries, in contrast to Ukrposhta, is not the price, but the range and quality of services offered,

Three main types of services for delivery from Ukraine and to Ukraine are available for Nova Poshta customers (fig. 2.14):

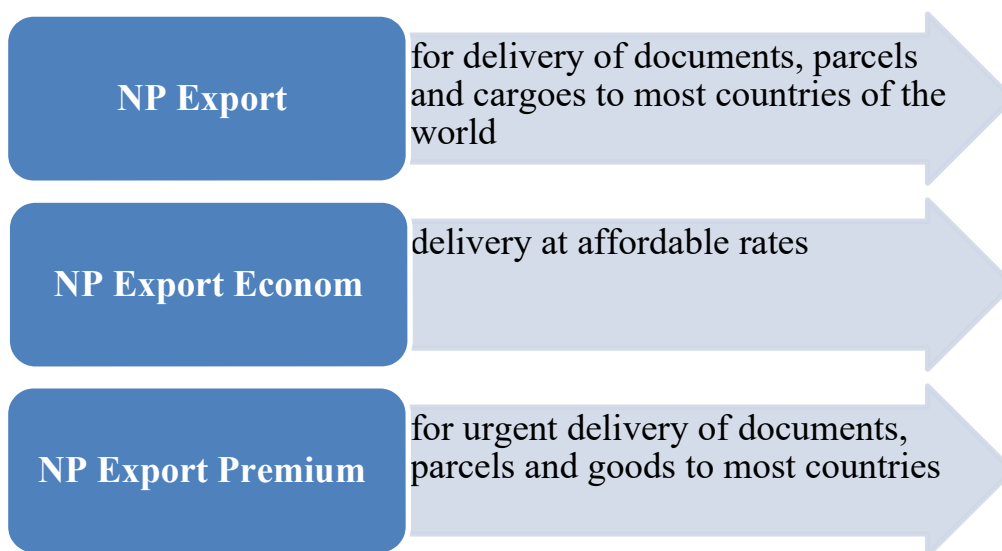


Fig. 2.14. Types of international delivery services offered by the leader of the delivery services segment Nova Poshta

Source: compiled personally based on [51]

Nova Poshta, as the leader of the Ukrainian market in the organization of international deliveries, provides services for international deliveries of goods weighing up to 1000 kg per 1 place, and covers most countries of the world (Table 2.10).

Characteristics of the parameters of the main types of international deliveries offered by Nova Poshta

Parameters	NP Export Premium	NP Export	NP Export Econom
The main advantage	The fastest delivery	Affordable tariff	Affordable tariff
Geography of coverage	Most countries of the world	Most countries of the world	Moldova
Type of shipment	Documents, parcels, cargo	Documents, parcels, cargo	Documents, parcels, cargo
Type of delivery	From the office to the door	From the office to the door	From the office to the door
Maximum weight	70 kg	70 kg	1000 kg for 1 place
Maximum dimensions	Length - up to 120 cm width - up to 80 cm height - up to 69 cm	Length - up to 120 cm width - up to 80 cm height - up to 69 cm	Length - up to 240 cm width - up to 120 cm height - up to 170 cm
Estimated cost	Up to 10,000 euros	Up to 10,000 euros	Up to 10,000 euros
Available services	Export and import	Export	Export and import

Source: compiled by author based on [51]

Each of the three types of international deliveries (see Figure 2.14) has its advantages. Delivery under the package "NP Export Premium" guarantees the fastest delivery, delivery under the package "NP Export" or "NP Export Econom" offers an affordable rate. The estimated value of export-import goods should not exceed 10,000 euros.

One of the main advantages of any logistics company today is the software products they implement to automate their business processes.

Nova Poshta is an API (application programming interface), a set of tools for automating work with Nova Poshta. API functionality allows you to quickly integrate logistics processes into any business and is the only entry point for all customers and services.

To start working with the API functionality of Nova Poshta, the customer of services, including for international deliveries, needs to generate an API key and use it when generating requests. The key can be generated in the personal account menu.

The exchange of data using the API is carried out via HTTPS using the method of transmitting POST or GET data to the entry point, depending on the type of request XML or JSON [51].

The company's official website has a portal dedicated to the integration of the New Mail API, which describes in detail how to work with the API, including in various programming languages.

The rating of Nova Poshta is very high in the cargo delivery segment. It is practically a monopolist in the industry, so it constantly changes the conditions of use and increases the cost of services. It has a serious competitor - Ukrposhta, which has rebranded and started implementing updates. The process is difficult, but the service attracts more and more customers. For example, recently a large online store Rozetka announced the beginning of cooperation with Ukrposhta.

In 2018, Ukrposhta consolidated its leading position in the international delivery market. The company processed 34.4 million international import and export shipments, which is almost 45% more than in 2017. In general, the company's revenues from international operations increased by 37% [51].

To increase shipments and revenues, Ukrposhta last year introduced a number of steps to increase capacity in processing international shipments and avoid possible delays in shipments. In particular, at the initiative of the company and in cooperation with Boryspil International Airport and in partnership with Ukraine International Airlines, a new mail processing technology was introduced with the involvement of certified handling companies. At the end of 2018, the first pilot flights were also made using EU airports, in particular the airport in Rzeszow (Poland) to transport mail to New York (USA).

Imports grew due to new projects with two key partners in the delivery of goods from Asian marketplaces. For example, Ukrposhta and Cainiao (the logistics platform of the Alibaba group of companies, which includes the AliExpress trading platform) have created the AliExpress Saver product, which combines affordable delivery for low-cost goods with the ability to track shipments. The second landmark partnership for the import destination was the signing and launch of a special delivery channel with the Hong Kong National Post [51].

In addition, Ukrposhta has joined the world's largest infrastructure project, the New Silk Road (One Belt, One Road). The company is involved in a pilot project of

China Post to transport mail by rail from China to Poland with subsequent reloading by road to various European cities. Ukrposhta also launched accelerated delivery channels for China's JD.com and Joom, Britain's ASOS.

At the same time, the company continues to develop the export direction of international operations, a cumulative system of bonuses was introduced - more than 3,800 exporters received discounts on parcels. Thus, Ukrainian small and medium-sized businesses have the opportunity to enter international markets and trade on the largest online platforms in 230 countries and selected regions of the world.

In 2019, Ukrposhta actively increased the number of online shipments through such tools as API, "personal account", mobile application and at the end of 2018, 36% of all shipments were processed online.

In 2019, Ukrposhta also significantly expanded the list of airline partners to which it delivers shipments. Contracts with Turkish Airlines, Lufthansa, LOT, Silk Way Airlines, Brussels Airlines, Austrian Airlines were added to UIA, KLM, AirBaltic, Belavia. Currently, Ukrposhta has the opportunity to send mail for 32-47 flights per day, depending on the departure schedule.

The main export countries to which Ukrposhta delivered the most in 2019 are the USA, Great Britain, Canada, Germany, France, Poland, and Australia. The largest importers were China, the Netherlands (as a transit hub), Israel and the United States.

In addition, 15 seminars of the free educational project E-Export School from Ukrposhta and 20 events in partnership with the CUTIS program (Canada-Ukraine Trade and Investment Support Project with the support of the Government of Canada), the Chamber of Commerce and Industry of Ukraine and Craft it! takes place within the framework of the Eastern Partnership program of the European Union (eaptc.eu) under the administration of the German organization Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). These projects were continued in 2019. [51]

Despite the fact that the market is a competition of two major players, alternative services have enough opportunities for development. The market is large and competitive, so large players cannot cover all service segments. Due to this, even

new companies appear. For example, the Justin delivery service recently opened. She will work on the bases of Fozzy Group and Autolux.

2.3. Characteristics of the information online platform for the organization of international cargo deliveries

In the transport business in recent years, the term "transport exchange", "transport aggregator". There are no definitions of these definitions in the legislation of Ukraine. Business under the transport exchange means an online information platform, which is a tool to simplify the exchange of information between shippers and consignees in the process of organizing the transportation of goods, their insurance, payment for services, customs clearance, etc.

Transport exchanges, as online platforms for the exchange of information, can be divided into modes of transport: road (freight), rail, water and air transport. In this case, the functions of transport exchanges depending on the mode of transport are different. For example, the Container Tracker system is used to organize water transport, which allows you to get information about transshipment ports and transit time, as well as track the current position of the container on the Google map at <https://www.searates.com/ru/container/tracking>. To obtain information about the location of containers, it is enough to enter its number and shipping line [30].

On railway transport - this is the service "Wagon Info" [6]. Displays the movement of cars and goods online: integrates information about the movement of cars and presents it in the form for analysis on individual web pages of the site; has at its disposal initial data on operations with wagons, which regularly come from the information network of the railways of Ukraine, other CIS countries and the Baltics [Wagon Info.]. On air transport, you can also track the cargo by invoice number, specifying it in the search bar on the site <http://www.union-cargo.com/tracking> or <http://www.avia78.ru>. [13].

Currently, the most famous in Ukraine are almost two dozen road transport exchanges, which include not only domestic online platforms. Among them: Lardi Trans.com, Della.ua, Degruz.com, Cargo.lt, Logistoffice.com, Timocom.ru, Trans.eu, Transporeon.com, Transport.md, Transinfo.by, Transport.totalsystem.md, Tona.com.ua, Sit-trans.com, Stascom.com, Sovtes.ua, A2b.direct, Logintrans.ru, Avtodispatcher.ru, Ati.su. Among the most famous users - Lardi trans.com, Della.ua, Trans.eu, Degruz.com, Cargo.lt.

Transport exchanges (TB) differ not only in the type of transport, but also in the nature of the services they provide. There are general and specialized TVs. For example, Tona.com.ua provides transport search services for apartment and office relocations, transportation of pets, household appliances, furniture, etc. There are also open and conditionally closed TVs, which have a limited number of users, but are large companies, holdings, corporations. For example, Sovtes, whose main customer base is large corporate customers, such as Metinvest, Interpipe, Khortytsia, etc. [13].

Fig. 2.15 shows the preferences of users of trucking exchanges in Ukraine.

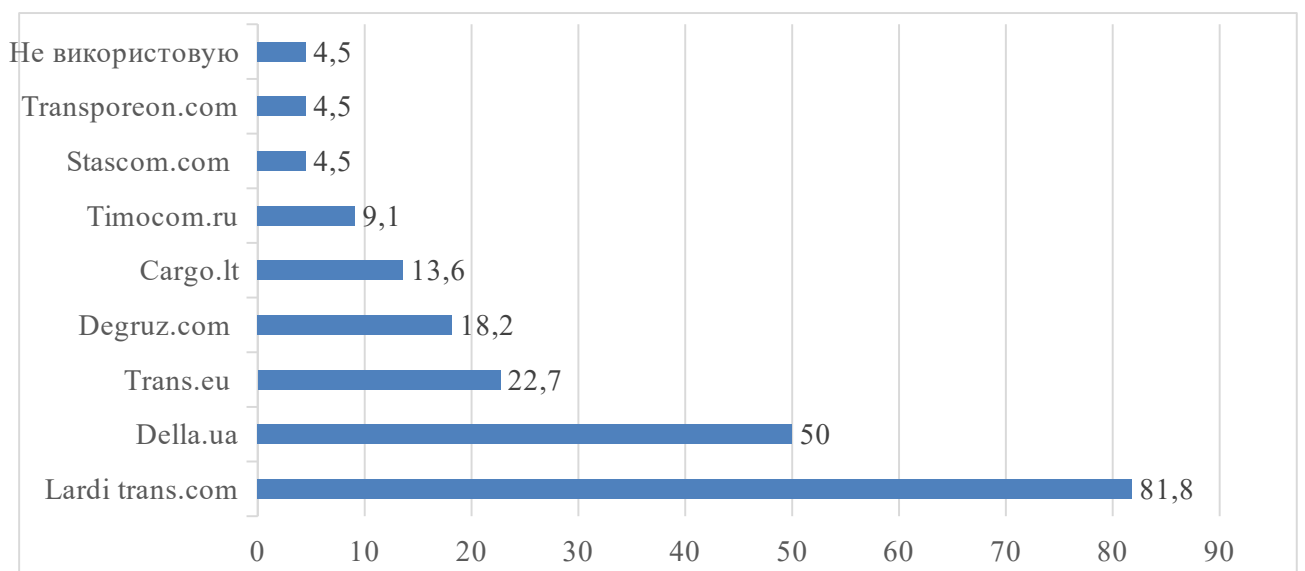


Fig. 2.15. Freight road transport exchanges in Ukraine by popularity, %

Source: based on [49]

It should be noted that most users of transport exchanges are registered on several online platforms.

According to survey data (Fig. 2.14), the most popular are Lardi trans (81.8%), Della (50.0%), Trans (22.7), Degruz (18.2), Cargo (13.6) [13]. Among which 3 companies are purely Ukrainian (Lardi trans, Della and Degruz).

Table 2.11 summarizes the characteristics of the advantages of the main players in the Ukrainian market of transport exchanges.

Table 2.11

Characteristics of the main transport exchanges represented on the market of Ukraine

transport exchanges	Characteristics of the main parameters of activity
Lardi-trans.com.	Ukrainian exchange, which is popular with Belarusian, Russian, Moldovan, Baltic and Kazakhstani carriers and shippers. Has been operating since 1999. Convenient interface, small news feed, tenders, cargo and transport base. More than 100 thousand accounts are registered on the Lardi-trans.com website. Every day, more than 50,000 applications for freight transportation and free transport offers are posted on the site. Registration and placement of applications on the site Lardi-trans.com are free, and the minimum cost of access to contact information for applications within Ukraine is 150 UAH.
Della.ua	the resource is present in all CIS countries. It is enough to add the domain of a particular country in the name of the della site, for example .by; .ru; .ua; .kz; .az, and you can find loads in a single CIS country. An interesting service function is tracking price offers for cargo transportation within each country, as well as on popular international messages. However, many offers of cargo and transport on the exchange are duplicated from other exchange transport platforms.
Trans.eu	An Internet platform used by more than 36,200 companies in their daily work. The cost of the platform's package of services is 828 euros per year. For companies that have used Trans.eu, 7 days of full access are provided to decide on further use. Official representation of Trans.eu (Poland, Wroclaw, 2004). It is one of the most popular European transport platforms, including not only the stock exchange, but also a number of IT solutions.
Degruz.com	Ukrainian stock exchange, founded in 2006. The number of registered companies, as well as private entrepreneurs, is over 90,000. Every day, 70 new companies are registered. The exchange works mainly with direct owners of cargo, the number of applications from 7000 per day depending on the season. Getting started with the exchange is simple, and documents are requested only in case of doubt about the correctness of the data entered by the user.
TimoCom	European Transport Exchange, founded in 1997 The exchange provides the option of 4-week free use without restricting access to all services, such as Emar (navigation), profile of contractors, tenders, etc. After testing, the management of the exchange separately with each company sets the number of accounts (each paid separately) depending on its needs. If the company has been operating in the market for less than 6 months, it will not have access to the platform. Timocom also has a Timocom CashCare section, which allows you to get help in litigation with the customer or carrier.

Source: based on [49]

The main users of the services of transport exchanges, according to Fig. 2.16, are freight forwarding companies (45%). 2nd place is shared by transport companies and manufacturing companies (18% each). Logistics companies, as well as distributors use the services of transport exchanges less (5%), which can be explained by the presence of these companies have their own software products that provide solutions to the organization of cargo delivery. But they also join the services of exchanges.

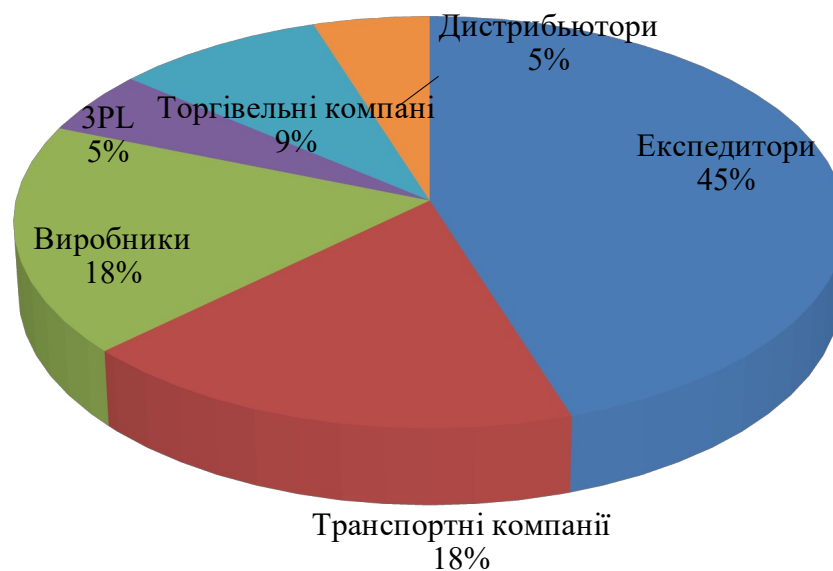


Fig. 2.16. The scope of activities of users of road freight transport exchanges

Source: sweetened on the basis of [49]

Today, more and more companies can no longer present their work without the services of transport exchanges. 73% of respondents said that they use the services of transport exchanges every day in planning their activities (Fig. 2.17).

And only 5% of companies do not apply for services to transport exchanges [49]. The list of the most popular IT-solutions that transport exchanges offer to their users is presented in table 2.12.

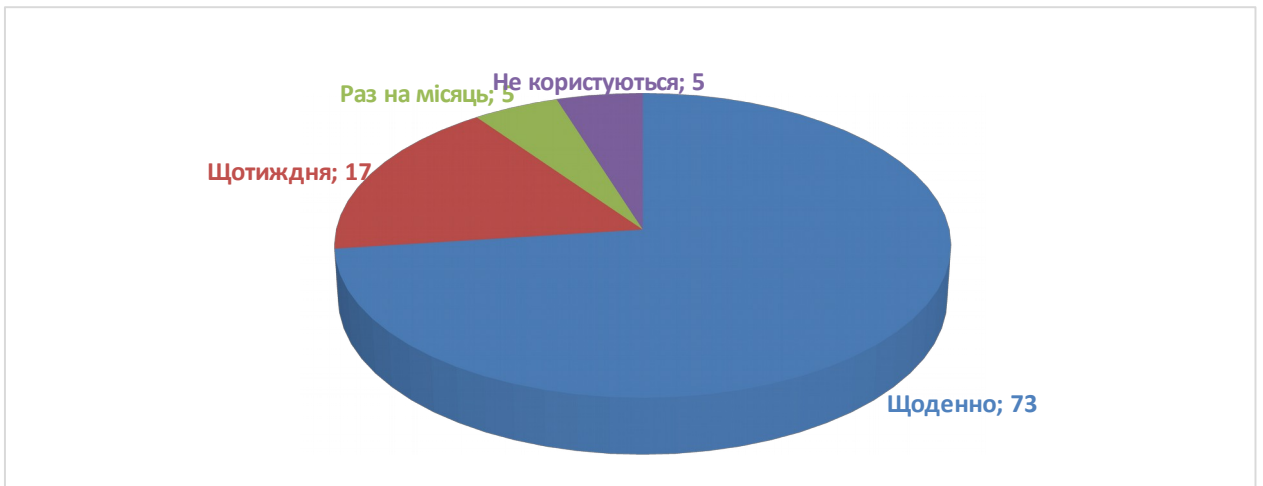


Fig. 2.17. Structure of demand for services of transport exchanges by frequency of appeals, (% of respondents)

Table 2.12

IT solutions offered by transport exchanges to their users

IT-solution	Characteristic
TransExchange	platform, which hosts more than 650,000 offers of free goods and vehicles every day, displays real estimates and reviews of companies, it is possible to create internal exchanges for a selected range of partners
TransMessenger	a business communicator that allows you to instantly communicate and make agreements between participants
TransCash	the department that deals with the settlement of financial debts, more than 90% of cases are resolved positively
TransMaps	road map with reflected squares, automatically builds a route in synchronization with the exchange of offers and has a function of search of freights on a route, it is convenient for search of groupage freights
TransOrders	a solution that allows you to instantly create an order based on concluded transactions
TransTracking	allows the service partner to track the location of cars on the Trans map
Goodloading	a tool that allows you to determine the effective placement of cargo in the body. It is enough to enter the size and quantity of cargo and the program will automatically select its more favorable placement
TransConnect	allows you to fully synchronize the CRM-system of the user's company with the Trans.eu platform, which automates the process of placing and updating proposals, instantly determines reports and statistics

Source: based on [13]

To determine the choice of a partner exchange, it is advisable to compare the number of registered users, the cost of placing applications, the level of security, the geography of activities, the possibility of digitalization (mobile applications), other indicators [13].

So, today a new model of freight transportation is being built, which is connected with the development of Internet technologies and automation of cargo transportation processes, reorientation to Western countries. At the heart of the new model of international freight transport are transport exchanges, which are also undergoing their transformation. We are already seeing the transition to digitalization of processes (creation of mobile applications). Almost every transport exchange already has such products.

2.4. General characteristic of FTP Logistics Company

FTP Logistics Company has been operating in the market of international freight forwarding services, transportation and customs since 2010. During the ten years of its functioning in the Ukrainian market, the company has gained a reputation as a reliable partner and continues to grow and develop along with its clients and partners, responding to their requests and meeting their needs for logistics services with optimal costs, time and money.

The company is managed by a team of young logistics practitioners, which explains its ongoing and dynamic development.

Today, FTP specialists offer a comprehensive approach to doing business, which allows them to support each transaction from start to finish. Quality consulting, document preparation, insurance, certification, transportation by various modes of transport, customs services and import of goods - all this and much more takes over this logistics company.

Thus, in 2014 FTP received the Industry Leader Award 2014 (twenty-eighth place (silver) rating in Ukraine among small enterprises in terms of financial and economic activity "Investment attractiveness" by main activity of KVED 52.29 - other support activity in the field of transport).

The main services provided by the company:

- customs brokerage services;
- aviation and sea freight;
- road transportation;
- financial services.

The main advantages of a logistics company are presented on its website:

1. Efficiency and quality of services provided by the logistics company;
2. Ten years on the market of freight forwarding services;
3. An experienced and proactive team of specialists;
4. Ownership of offices in Kyiv and Odessa;
5. The ability to track your shipments with our FTP Tracker application;
6. Involvement into the Worldwide network.

A detailed description of the services provided by FTP LLC is presented in fig. 2.18.

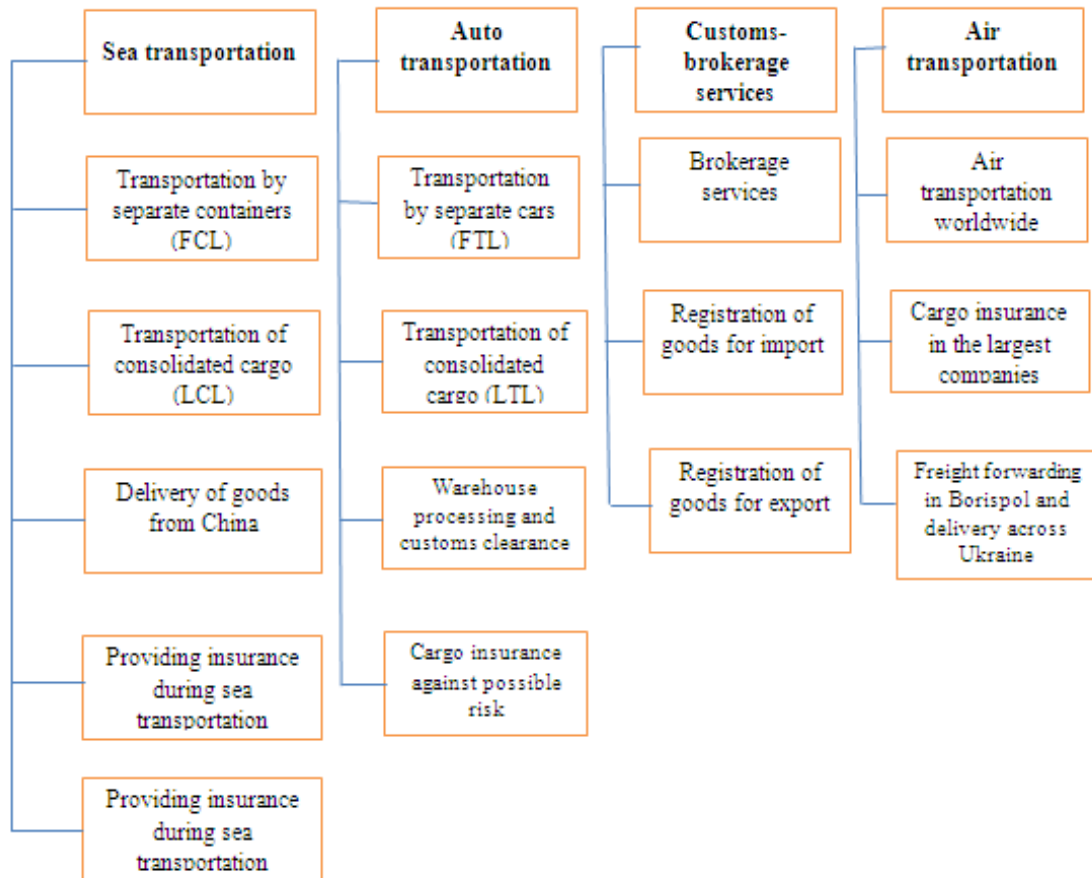


Fig. 2.18. Scheme of services of FTP LLC

The structure of the company "FTP" can be attributed to the linear-functional structure (see Fig. .2.19), because it provides such a division of management work, in which the linear management units are called to command, and functional - to advise, assist in the development of specific issues and preparation of relevant decisions, plans.

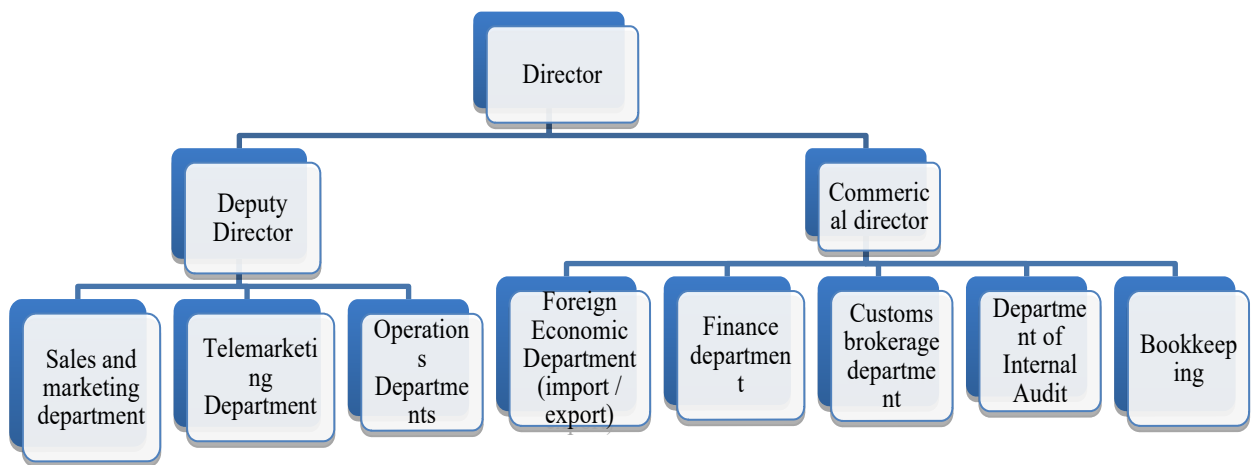


Fig. 2.19. Organizational structure of FTP LLC

The advantages and disadvantages of the linear - functional structure of the company "FTP" are shown in table 2.13.

Table 2.13

Advantages and Disadvantages of the linear – functional structure

Advantages	Disadvantages
deeper preparation of decisions for the implementation of work related to the specialization of employees;	lack of close relationships and horizontal interaction between different units;
relieving line executives from resolving many issues related to financial planning, logistics, etc .;	each link is interested in achieving its narrow goal, not the overall goal of the company;
building a manager-employee relationship in a hierarchical staircase for which each employee is subject to only one supervisor.	top-level accumulation alongside strategic operational tasks.

It should be noted that this structure of the logistics company is best suited for carrying out its activities in comparison with other possible structures of the organization. [24]

Based on the tasks and goals of the departments involved directly in the organization of the logistics chain, we will present the range of FTP services, which will be discussed in detail below:

- FEA operator service is a comprehensive door-to-door logistics solution, which includes searching for suppliers / markets, designing and maintaining contracts with suppliers, paying for goods, preparing products for shipment (collection, sorting, marking, warehousing) customs clearance both in the country of departure and in the country of destination, transportation of goods (choosing the optimal mode of transport), obtaining permits and certification of products in the country of destination, organization of delivery of goods a receiver like.

- a "sales agent" service that helps you choose the best scheme for working with foreign contractors and helps you to establish the correct contract, financial and documentary work in the construction of supply chains. This service is possible due to experience and knowledge in all fields related to economic activity in Ukraine as well as in the countries of the European Union, Asia, USA, CIS;

- customs services assist with the completion of all formalities in export / import / transit mode, defend the client's interests in customs, help with the receipt of all necessary certificates, assist with customs accreditation.

The above services have provided door-to-door delivery services from China and the EU, which are in-demand services to clients of the logistics company.

The company also has the ability to consolidate goods through warehouses on major transport corridors (Germany, Italy, Hungary, Poland, Lithuania), allowing to predict delivery times, choose cost-optimal routes, efficiently manage product and financial flows.

In the field of international maritime transport, FTP specialists are ready to provide freight transportation by sea to even the most remote regions with poorly developed infrastructure, so there is an experience of transporting goods through major world ports in China; in Central, South-East, East, West, South-West Asia; in Europe and Australia, and also in ports along the coasts of North and South America.

The separate container transportation service is possible for safe cargo of any type:

- overshot cargo;
- bulk cargo;
- ideal for those who have difficult routes and need overloads on other mode of transport to deliver to final destination;
- particularly in demand for multimodal transportation;
- refrigerated cargo that needs special attention (for example, it may be food);
- non-standard, oversized and heavy cargo, for which special permission is required.

The company uses the following transit ports for the organization of sea freight transportation to Ukraine: Illichivsk (Ukraine), Gdynia and Gdansk (Poland), Klaipeda (Lithuania), Riga (Latvia), Constanta (Romania) and Hamburg (Germany).

For the organization of cargo transportation by air transport, logistics companies have enough contracts with airlines and agents at airports to ensure timely delivery of cargo from / to anywhere in the world. The most difficult part in terms of execution and costs is the delivery of imported cargo through the "main air gate" of Ukraine - Boryspil Airport, which is why the airport has its own office, which provides the optimal timing of the next logistics chain: obtaining documents from the warehouse, import customs clearance, payment of terminal fee for warehouse, receipt of cargo from the warehouse, loading in the car for subsequent delivery to the recipient.

Given the popularity of air freight services from China, FTP has a wide network of partners in the most industrialized cities of China, such as Hong Kong, Guangzhou, Shanghai, Shenzhen, Beijing. This allows the company to arrange for the carriage of goods by air, including dangerous goods, in the shortest possible time and with optimal costs.

Particularly important part of the FTP services is brokerage services, while the provision of brokerage services is not limited to the "standard" registration of goods for import or export as mentioned above, and also includes:

- registration of cargoes under preference (medical devices, medicines, technical assistance, etc.);
- courier clearance (same for individuals)
- registration of temporary import / export to the exhibition, warranty repair, etc.;
- registration of transit cargoes.

It should be noted that in addition to the office at the Boryspil airport, the company has its own office in the Odessa seaport, which significantly saves time for expedition and customs clearance of import / export cargo at the Odessa seaport. An important component in the range of services of the logistics company "FTP" is the ability to control delivery, namely, tracking of cargo during transportation, both in Ukraine and during international delivery.

It is possible to track cargo transportation on the company website:

- in Ukraine: by New Mail, UkrPoshta, Deliver, Autolux, In-Time, Bridge Express and SAT;
- during international transportation: DHL, UPS, TNT, Fedex, DB Shenker USA, DHL G.F., Air Cargo, POST / EMS (with USPS);
- and also by container number, bill of lading or MRN.

To sum up, LLC FTP meets the criteria that determine a quality partner in the field of foreign economic activity and integrates the whole complex of procurement, financial and transport logistics. Organizational structure - linear and functional. It provides such a division of management work, in which linear management units are called to command, and functional - to advise, assist in the development of specific issues and the preparation of appropriate decisions and plans. Main services provided by the company: customs brokerage services; aviation and sea freight; road haulage. An important component in the range of services of the logistics company "FTP" is the ability to control delivery, namely, tracking of cargo during transportation, both in Ukraine and during international delivery.

Assessment of the financial and economic condition of the enterprise is the key to its existence, presence in the relevant market, creates a positive image and the possibility of ensuring the profitability of its activities.

The purpose of such analysis is to predict the further development of the enterprise, makes recommendations for adoption thoughtful and informed decisions on elimination of "bottlenecks", increases competitiveness and maximizing profit. [18]

Business analysis is related to company statistics and trend analysis. Consider the volume of work performed by service groups over the last three years (see Table 2.14).

Table 2.14

Scope of completed projects for 2017 – 2019

Type of services at “FTP”	Years			Total
	2017	2018	2019	
Road transportation	363	483	502	1348
Air transportation	17	21	26	64
Sea transportation	157	183	210	550
Brokerage services	920	951	983	2854
Total	1457	1638	1721	4816

Thus, the structure of services for three years indicates the preference for the demand for brokerage services in the overall volume of services of the company, but it should be noted that often brokerage services are includes in a package with freight forwarding services of different types of transport under organization of both unimodal and intermodal transportations.

Therefore, from the point of freight forwarding, most deliveries are made by road and sea transport, and the least one by air transport.

Most of the freight forwarding services offered by the company FTP are in the mode of "import".

The percentages of freight modes indicate a negative foreign trade balance, and the logistics company is beginning to develop in the market of logistics services during transportation between third countries.

Since the logistics company does not have its own automobile vehicles, it cooperates with the largest carriers on the market of Ukraine, such as Nova Poshta, UkrPoshta, Deliver, Autolux, In-Time, Bridge Express and SAT.

It also cooperates with the world's largest express carriers such as DHL, UPS, TNT, Fedex, as well as with hauliers, most of which are small limited liability companies that have proven themselves as reliable partners over the years, such as Pan Autos LLC Vast Trans, Econo LTD.

The shipping lines that the logistics company cooperates with when providing freight forwarding services are Hapag-Lloyd, Evergreen, MCS, Maersk, Safmarine, ZIM and Yang Ming, ONE, CMA CGM.

Thus, most of the imports are from China, goods that are exported go mainly to Europe, North and South America, Kazakhstan.

When providing air freight forwarding services, partners of the FTP are such airlines as: Ukraine International Airlines, Austrian Airlines, British Airways, KLM, LOT Polish Airlines, Lufthansa, Turkish Airlines and others.

Most often, in the case of air transportation, FTP uses the services of a domestic company - UIA, which may be connected with optimal tariffs for transportation and large geographical coverage.

Qualitative financial analysis allows identifying key assumptions about the dynamics of enterprise development in the future. Based on the financial statements of FTP LLC for 2018-2019, it will conduct a financial analysis of activities and calculate indicators of liquidity, profitability and financial stability.

In general, it can be noted that this logistics company is quite successful in its activities, as evidenced by the main financial indicators in table 2.15 and in fig. 2.20.

Table 2.15

**The main financial results of the logistics company "FTP" for 2017-2019,
thousand UAH**

№	Types of services	Indicator	Years		
			2017	2019	2020
1	2	3	4	5	6
1	Freight-transportation services	Gross income	996,8	1115,2	1881,5
		Gross costs	674,9	943,5	1687,8
		Net profit	321,9	171,7	193,7
2	Brokerage services	Gross income	1260,6	2279,1	4511,3
		Gross costs	519,6	952,3	2229,3
		Net profit	741,0	1326,8	2282,0
3	Total	Gross income	2257,4	3394,3	6392,8
		Gross costs	1194,5	1895,8	3917,1
		Net profit	1062,9	1498,5	2475,7

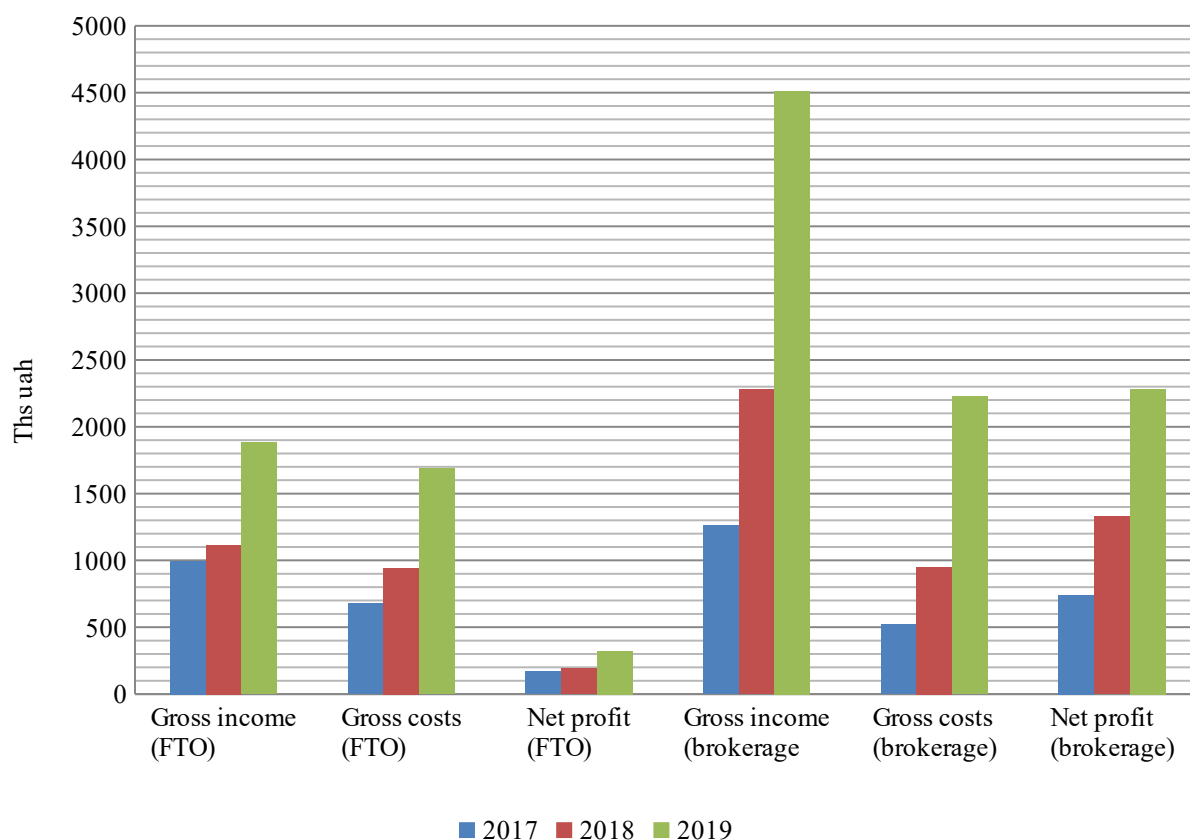


Fig. 2.20. Dynamics of the main financial results of the company "FTP" for 2017-2019, thousand UAH

In general, the dynamics of gross income and net profit is positive, which indicates the externally normal state of affairs in the logistics company.

The FTP company applies mesh topology in the internal communication process and a mesh is implemented as a basic topology in the organization as communication process. All departments have a connection to each other within the organization. This eliminates the use of external terminators. The following main advantages can be outlined of this type of system such as: the failure of one workstation doesn't affect the performance of the entire network and adding additional devices does not break data transfer between other devices; therefore, reengineering of telemarketing sales system will not affect the work of other departments. Though, apart of the advantages mentioned above the following disadvantage can be distinguished: the cost of implementation is high, maintaining the topology is difficult and time-consuming.

The study of the domestic market of international transportation was conducted in three areas. First, the state and trends of the international transport services market in Ukraine were analyzed. Secondly, the competitive situation in the Ukrainian market of international cargo delivery was assessed, in particular, the advantages and disadvantages of the main delivery services operating in the Ukrainian market and offering international cargo delivery services were assessed. Third, digital solutions in the organization of international cargo deliveries were characterized, which are already implemented at the macro level, taking into account global trends.

The Ukrainian market of transport services is attractive for foreign investors, and this already indicates the potential for its development. The largest investors in the Ukrainian market of transport services (TP) are Cyprus (29.1%), Germany and the Netherlands (13.4% each).

In the structure of export-import operations, despite the decrease in exports of TA, a larger share in the overall structure of export-import TA belongs to export deliveries (80%), which is certainly a positive factor. In addition, despite the war with Russia, more than half of Ukraine's export transport services (53.6%) are with the Russian Federation. Russia also accounts for 10% of imports of transport services.

There are many companies on the Ukrainian market that provide international cargo delivery services. The nature and range of their activities are very different. The study focused on delivery services that work with online stores. The study was conducted on the basis of a questionnaire survey of online stores that constantly use different delivery services.

Delivery services that work with online stores are quite technological: everyone has an API and almost everyone has a mobile application (except Zruchna).

Today, one of the most important criteria when choosing a service is the cost of delivery.

Also in analytical part of thesis the Logistics company "FTP" were describe/ It is operates in the international market forwarding services, transportation, and customs since 2010. For seven years of work in the Ukrainian market, the company has gained a reputation of a reliable partner and continues to grow and develop with its customers and partners, responding to their requests and meeting their logistics needs and services with optimal costs of both time and money.

The company is managed by a team of young professionals-practitioners in the field of logistics, which explains its constant and dynamic development. FTP meets the criteria that determine a quality partner in the field of foreign economic activity and unites the entire complex of procurement, financial, and transport logistics. Organizational structure - linear - functional. The main services provided by the company: customs brokerage services; air and sea freight; road haulage.

Given the popularity of air cargo services from China, "FTP" has a wide network of partners in the most industrialized cities of China, such as Hong Kong, Guangzhou, Shanghai, Shenzhen, Beijing. This allows the company to organize air transportation of goods, including dangerous goods, in the shortest possible time and at optimal cost. One of the main advantages of any logistics company today is the software products they implement to automate their business processes. The introduction of digital solutions in the management of the transport sector will allow Ukraine to integrate into a single transport network with Europe and Asia, and turn Ukraine into an international transport hub.

3. DESIGN PART

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3.1. Improving the organization of international cargo delivery through the development of a transport portal for electronic services

The priority areas of transport policy in Ukraine today are the development of multimodality of transport and digital transport corridors. To achieve these goals, the Ministry of Infrastructure of Ukraine creates modern electronic services in all areas of the transport sector.

Digitalization of processes in the field of freight transportation in Ukraine has long come, but not everyone is keeping up with this trend. Trucking companies that have adapted to innovation are one step ahead of their competitors.

To stimulate business to switch to digital technologies, it is necessary to introduce centralized online platforms at the macro level. In December 2019, Ukraine has already taken the first step in this direction, in particular, the launch of the transport portal of electronic services [76], which combines electronic services in all areas of the transport industry into one smart system.

On the transport portal you can order not only state administrative services in the field of transport, but also get other types of services. The portal was created taking into account the new standards of public services and the design code "DiYa".

Through the transport portal it is now possible to carry out all operations related to the licensing of road transport, booking permits for international transport of goods, obtaining permits for oversized transport, popular news in the field of transportation.

Without digital solutions, the development of the Silk Road and other transport corridors in Ukraine is not possible. The introduction of digital solutions in the management of the transport sector will allow Ukraine to integrate into a single transport network with Europe and Asia, and turn Ukraine into an international transport hub.

The introduction of electronic services is not just the transfer of old public services online. This is the optimization of services taking into account the urgent

market needs and convenience for consumers and users. In addition, in the future all state electronic services will be provided in a single interface. To do this, the Internet platform "Action" was launched, which has a modern look and is recognizable. The transport portal of electronic services works to implement a number of principles. Services are provided quickly, in a convenient format, payment for online services is introduced [10].

The following services can be obtained on the transport portal of electronic services [76] today (Fig. 3.1).

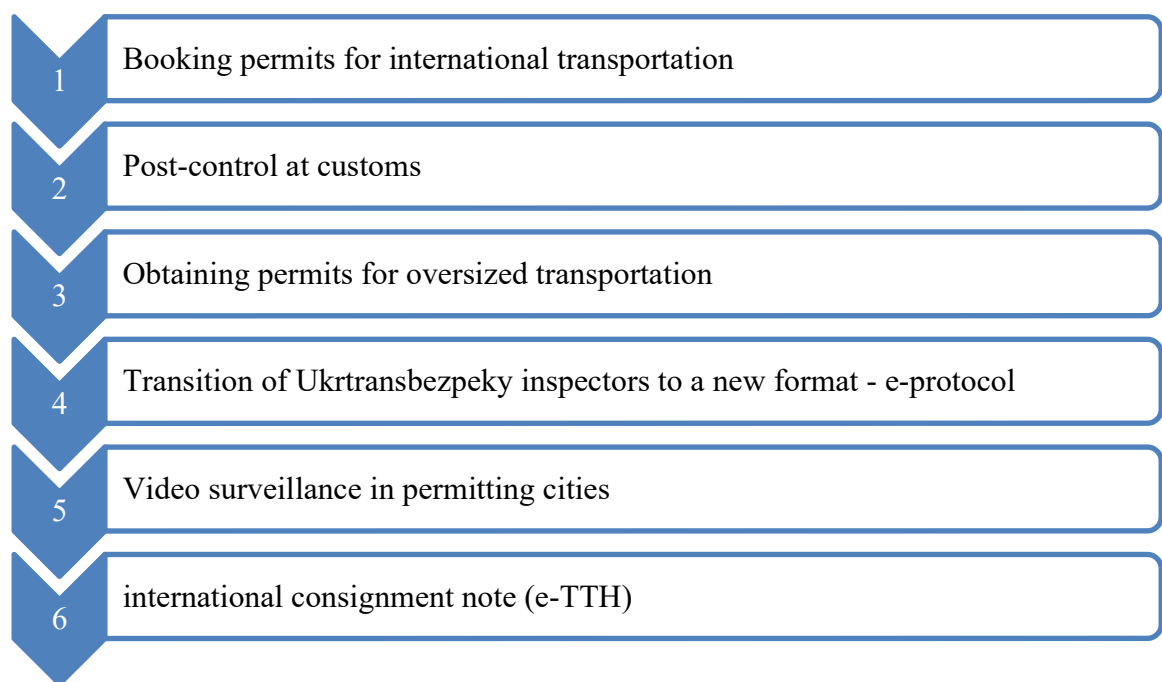


Fig. 3.1. Electronic services on the transport portal of the Ministry of Infrastructure

Source: compiled by author based on [76]

Let's consider in more detail those services which are presented on a transport portal, and what effect is expected from their transfer to an online format.

Booking permits for international transportation.

Previously, nearly 800,000 permits were manually ordered and issued annually.

At the same time there were problems which are easily solved through introduction of a transport portal (fig. 3.2):

Existing problems in obtaining permits for international transportation

- A large number of documents in paper form.
- There is no certainty about the availability of a permit at the time of visiting the permitting point
- Queues at delivery points
- Impossibility of comfortable payment
- Corruption component

Effects of obtaining permits through the transport portal

- Convenient modern interface in the design code "Diya"
- Integrated identification system id.gov.ua.
- Online application submission and payment
- Quick document verification
- Booking a specific permit form for a specific carrier
- The procedure takes up to 3 minutes.

Fig. 3.2. Expected effects from the implementation of the system of obtaining permits for international transport through the transport portal

Source: compiled by author based on [76]

Simplification of the permit system applies primarily to truckers, who often have to stand in long queues at the border due to lack of necessary documents. The number of such permits is limited, so there is a constant war between drivers over who will get them first.

The second service offered by the transport portal is online post-control at customs.

The portal, which exchanges data with customs, provides an opportunity to actually track intruders who try to forge permits or violate the order of their use. Each registered permit can be traced from the moment of its reservation or printing to the border crossing and return to the permit issuing point.

The third service of the transport portal is permits for oversized transportation. The effects of this service are presented in Fig.3.3

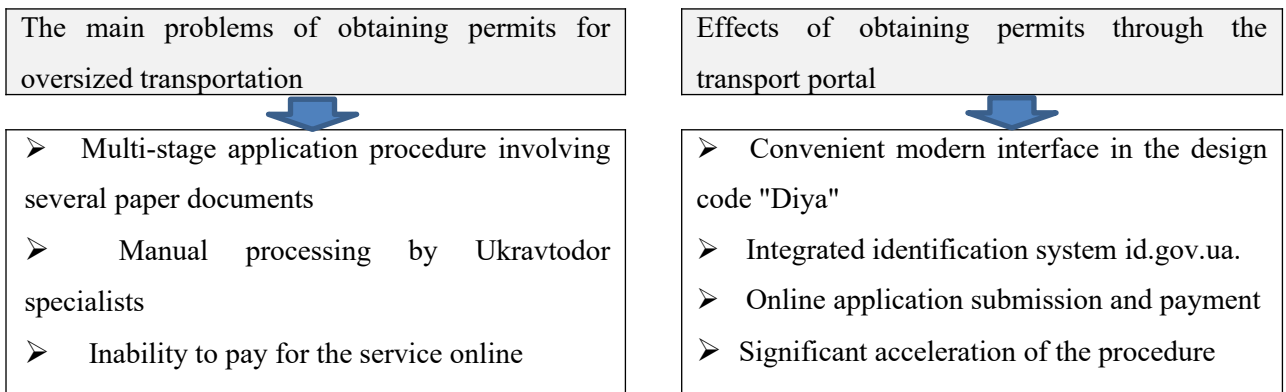


Fig. 3.3. Expected effects from the implementation of the system of obtaining permits for oversized transportation through the transport portal
 Source: compiled by author based on [76]

The fourth service of the transport portal is the introduction of E-protocols, which simplifies the accounting and prompt processing of protocol acts issued by Ukrtransbezpeka inspectors. This allows inspectors to promptly, directly from the scene of the accident, to transmit to the Ukrtransbezpeky control department information about violators, which further contributes to the efficiency of handling road accidents.

The fifth service - video surveillance in Permitting Points, allows for public control and increase the transparency of the permitting process. Today there are such video surveillance points in Kovel, Holoby, Lviv, Vinnytsia, Khmelnytsky, Boryspil, Korosten. In the near future it is planned to introduce this service in 7 more important points.

The sixth service of the transport portal is an e-consignment note, an electronic document certifying the rights to carry out cargo transportation. E-consignment note is a legally significant document intended for all participants in the transport process, accounting for goods on the way of their movement, payments for transportation of goods and accounting for work performed. Currently, a pilot project has been implemented, a central database of e-consignment note has been built, and data from commercial document management systems that serve carriers are entered into it [76].

The transport portal is expected to expand the list of services for motor transport in the near future (for example, transshipment permits, services for seafarers and even the ability to register aircraft [76]).

The Ministry of Infrastructure of Ukraine claims that the portal will be filled with additional new services. In addition, the plans of the Ministry of Infrastructure include the introduction of paid services, connection to the electronic interaction system "Trembita", the introduction of the Security Operation Center on the basis of the cybersecurity center of the State Securities Commission.

Another promising area of total digitalization of the transport sector in Ukraine may be the emergence of new services such as "Uber trucks", for example, launched by Convoy (Washington), which offers online ordering services, keeping in touch with customers through the site or Android application [97]. The company provides an electronic platform that connects customers and drivers directly, and charges a fee for brokerage services. The only difference is that Uber is engaged in passenger services, and Convoy enters the freight market. In Ukraine, the A2B Direct transport exchange has appeared under the slogan of the national freight Uber, but it is too early to talk about its development.

Thus, the main directions of international freight development in Ukraine, as a guarantee of international trade and, accordingly, the national economy, should be considered, firstly, the functional improvement of the transport portal created by the Ministry of Infrastructure at the macro level, and secondly, "using uber" of the delivery process. cargo, thirdly, the divergence (diversity) of IT products in the transport sector, fourthly, the creation of transport IT-platform (Fig. 3.4).

" Using Uber's principles " is an attempt to introduce in freight a mechanism that has proven its effectiveness in passenger traffic, and ensures the creation and transfer of orders to the contractor on one platform online. But Uber Freight cannot yet compete with transport exchanges because many companies take part in freight transportation, which cannot be painlessly removed from the supply chain of transport services to the international market, given the specifics of freight transportation.

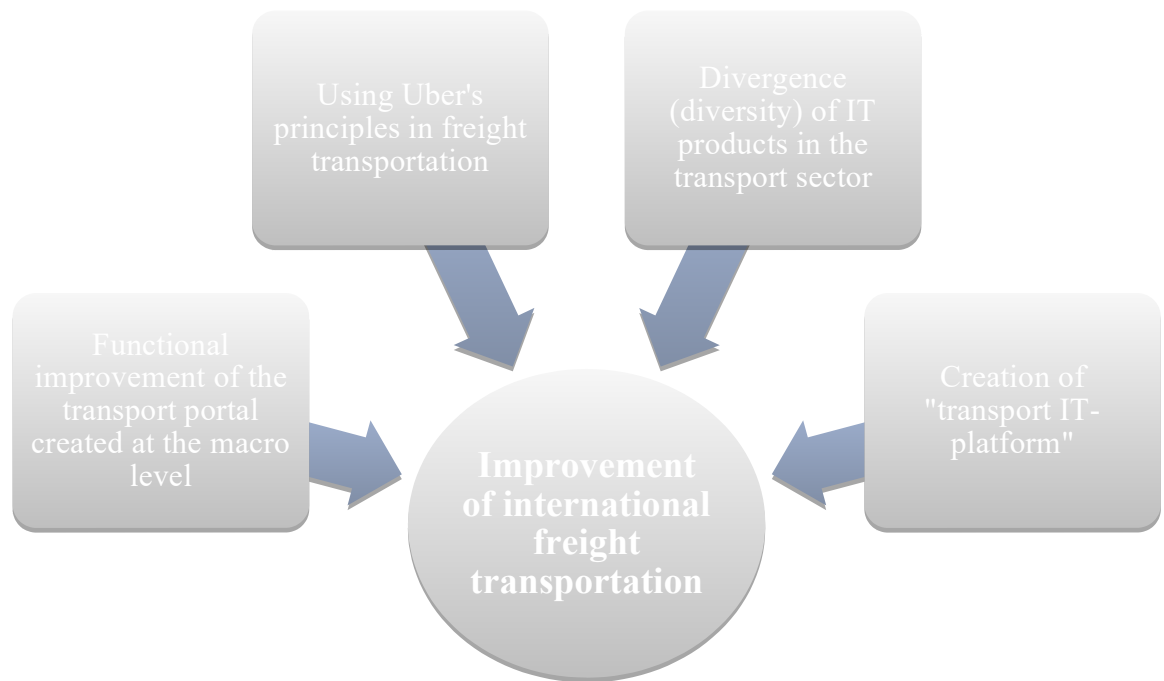


Fig. 3.4. The main directions of improving the international delivery of goods in a digital economy

Source: compiled by author

The second important direction in the development of international transportation should be considered the divergence (diversity) of IT products. To some extent, the trucking company can manage the integration of CRM-system, accounting, corporate chat, Google documents, GPS-tracking service. But the development of such a company will be largely constrained by the need to work with different data in different systems. Competitors who are able to aggregate information and process it faster will be more successful. That is why "Lardi-Trans", for example, develops not only the basic functionality of the "exchange" or bulletin board, but also consistently develops so-called value added products, which include services to work with fleet and cargo from the client's office, GPS-tracking, cargo and transport insurance, system of checking contractors and concluding contracts.

Another way to improve the process of international delivery of goods should be considered the creation of "transport aggregators", ie services that would maximize the automation of the process of finding orders, calculating costs, optimizing routes and minimizing intermediate man-hours.

Analyzed the experience of Uber, Lyft, Gogovan, Cargomatic, was created broader in functionality than the transport exchange - the aggregator Cargofy.com [13]. The aggregator is available in Ukraine, the USA, India. The aggregator automatically responds to orders for transportation and selects the nearest free carriers, with the appropriate body type, notifies them. On average, in 5 minutes one of the carriers accepts the order for execution. All deliveries are tracked in real time on the map, routes are automatically generated and there is a notification of changes in the delivery status. In addition, the algorithm analyzes the free space in the body of the truck and allows you to send the goods by accompanying transport, significantly saving on delivery. That is, transport aggregators are a possible next step in the transformation of transport exchanges, the development of which takes place both on the basis of transport exchanges and on the basis of CRM-products [77]: iCanDeliver, ABMRinkai, 4Logist, Skyriver, Sovtes, Rational Logistics, special attention

3.2. Introduction of electronic consignment note as a mandatory prerequisite for digitalization of international cargo delivery

With paper invoices Ukraine can't build international transport corridors. The electronic consignment note is an important step towards the digitalization of transport services. Among the post-Soviet countries, Georgia and Belarus already have a positive experience of implementing e- consignment note. For example, in Belarus, the turnover of electronic consignment note reaches 120 million units per year, and the potential savings from abandoning the paper counterpart is 600 million euros.

The consignment note is a single and obligatory document for all participants of the transport process, which confirms the fact of transportation and delivery of goods, payments for transportation of goods and accounting of work performed. Transportation of goods without consignment note is an offense. And the more goods

are transported, the more invoices are printed. This is hundreds of millions of invoices and hryvnias every year, because all the goods that Ukrainians consume, buy and sell every day - from food and clothing to industrial products and fuel - all go through paper invoices.

To understand the scale of the "paper" problem, some figures can be given.

Approximately 500 million invoices and their copies are printed in Ukraine every year. This is more than 120 full 20-ton trucks with 1 million packs of A4 paper, each of which costs an average of 70-80 UAH (Fig. 3.5) [35].

Add to this the cost of sending the original by paper invoice - it is still about 20-40 UAH and lost time, not to mention the printing and work of the responsible person [35].

It turns out more than UAH 1 billion of business expenses annually on paper invoices, which are ultimately paid by each of us, paying for the purchased goods.

To solve this problem, the paper invoice should be replaced by an electronic one. That is why the key goal of solving this problem at the macro level should be considered the full digitalization of transport services while ensuring the transition to the highest quality service.

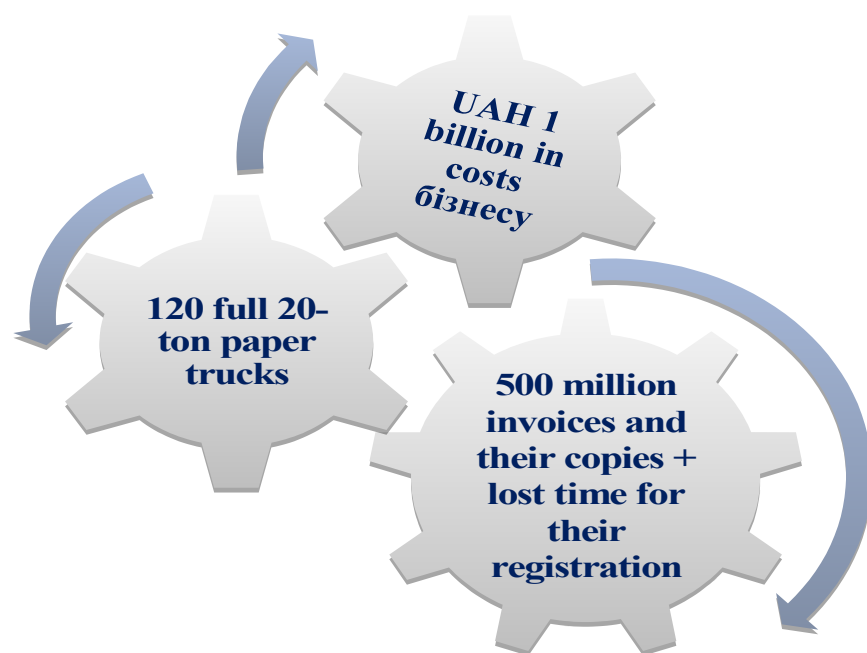


Fig. 3.5. Annual costs of consignment note in Ukraine

Source: compiled personally

The main indicators of competitive on the world market transport and logistics service should be - convenience and availability of services, speed and reliability of supply. Therefore, the launch of a pilot project to implement a single electronic consignment note (e- consignment note) is a major event.

The relevant service has already been launched on the transport portal e-transport.gov.ua. At the level of the Ministry of Infrastructure in accordance with the order of the Cabinet of Ministers of Ukraine "On the implementation of the pilot project for the introduction of electronic document management electronic consignment note" dated December 27, 2019 N 1392-r. [60], built a central database of e- consignment note, which includes data from commercial document management systems that serve carriers.

The business received a user-friendly e- consignment note and got rid of another paper bureaucratic process, which, moreover, did not guarantee the result, but took away valuable time and resources. Because the registration of each paper consignment note is always a great expense of resources and time, it is a bureaucratic system that required the registration of the original invoice, several copies and the collection of at least 3-4 signatures of persons who are often physically in different parts of countries.

Registration of paper consignment note is associated with an incredible amount of extra work, unjustified expenditure of resources and time (prepare, print, sign all participants in the transport process, etc., make copies, etc.). And without the original invoice it is impossible to pay for services. In addition, such an invoice can be lost (as well as replaced), and after all it still needs to be stored somewhere, because this document is necessary for the initial accounting [54].

The pilot project on e- consignment note is planned to be implemented in 2 stages; at the 1st stage to introduce e- consignment note for general groups of goods. At the 2nd stage - to digitize consignment note for excisable groups of goods. At the third stage - to introduce the international format of e-CMR electronic consignment note for international freight. On the fourth - to standardize e- consignment note and e-CMR (Fig. 3.6).

As can be seen from Fig. 3.6, the introduction of the international format e-CMR - electronic invoice for international freight is possible only after the implementation of the previous 2 stages of the e- consignment note project in Ukraine for domestic transport.

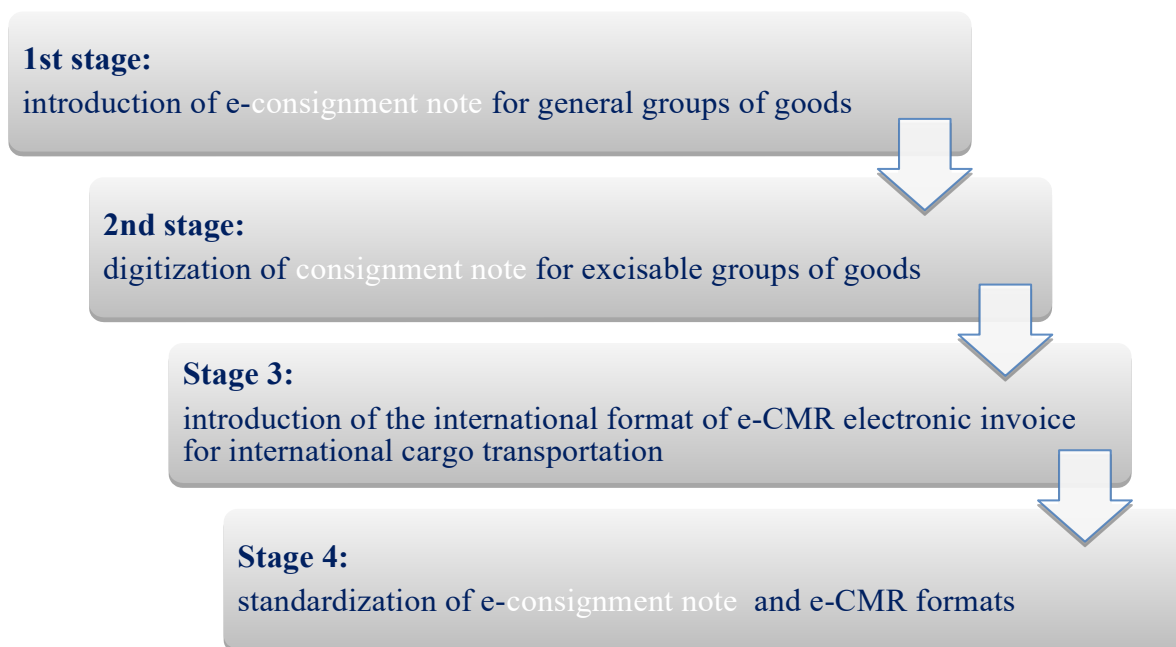


Fig. 3.6. Stages of implementation of the pilot project for the implementation of e- consignment note

Source: compiled by auhor based on [35]

The introduction of e- consignment note will help achieve a cumulative effect, both for the transport and logistics business and for the national economy as a whole.

The transition to e- consignment note requires the creation and use of a single central e- consignment note database. This is a kind of register, the purpose of which is to unify and collect all e- consignment note in a single space for all participants. Single central e- consignment note database must be compatible with various electronic document management systems.

How will it work? The consignor with the help of an electronic document management provider, signed by a qualified electronic signature e- consignment note, must register in the central database, where e- consignment note receives a registration number. At this number, employees of the State Transport Security

Service (or police) can find out about the basic data of transportation: the place of shipment and destination, the nature and weight of the cargo, information about cars and participants in the transport process, etc.

The first results of the introduction of e- consignment note indicate a significant reduction in the time for document administration - up to 1-3 days (including transportation time), while with paper consignment note the process sometimes took 21 days. Regarding savings (by courier delivery), the average cost decreased by 5-30 times (Fig. 3.7) [5].

The expected results from the introduction of e- consignment note are presented in Fig.3.8.

It is important to understand that the transition to e- consignment note will create digital transport corridors in the future and will promote the development of multimodal transport in the Europe-Asia-Europe connection, renewal of Ukraine's status as a transit state, construction of a bridge between East and West, Ukraine and investment in infrastructure. .

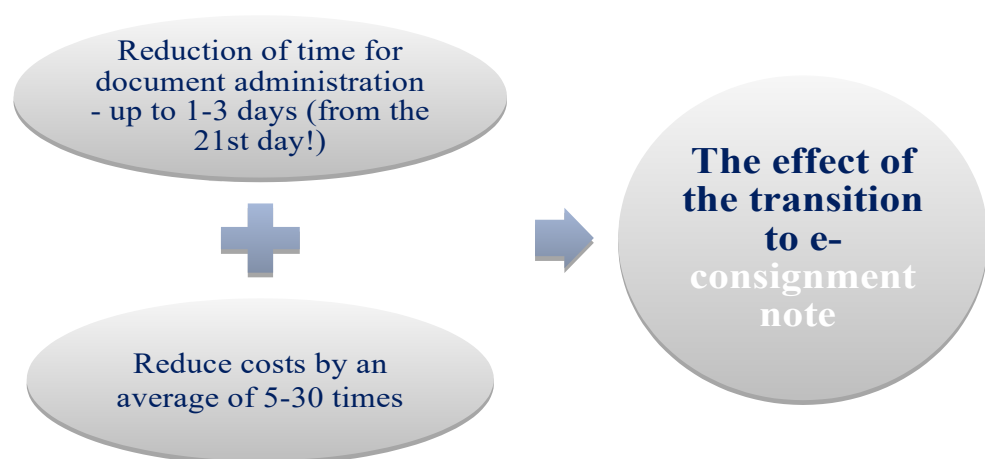


Fig. 3.7. The effect of the transition to e-consignment note

The transition to e- consignment note is a prerequisite for the creation of the transport and logistics sector of additional added value and new jobs, which in turn will contribute to the development of all sectors of the economy without exception.

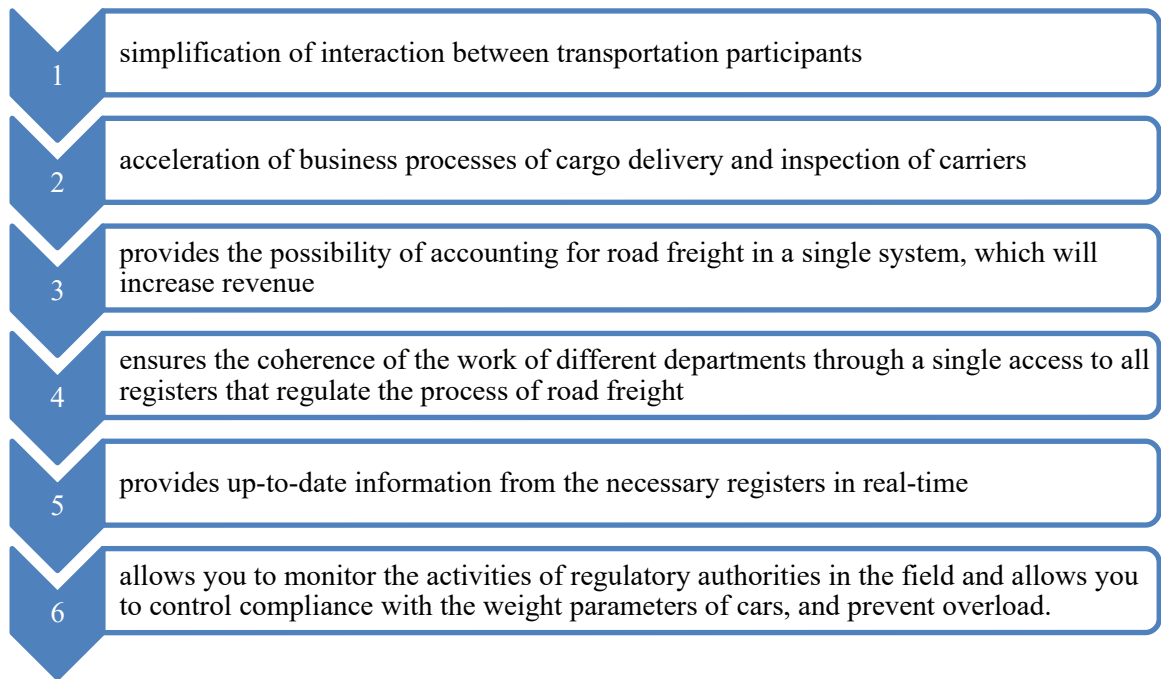


Fig. 3.8. Expected results from the implementation of e- consignment note

Source: compiled by author

The full-fledged translation of consignment notes into electronic form will have a significant impact on both the freight market and the economy as a whole. According to the Ministry of Infrastructure, in Ukraine companies spend up to 200 million A4 sheets per month on consignment note [5]. Using electronic documents will mean huge paper savings and significant cost savings.

3.3. Assessment of macro-effects from digitalization of the international cargo delivery process for key stakeholders

The influence of digital technologies is increasingly felt in all sectors of the economy, including the nature of the organization of international cargo delivery.

The introduction of digital technologies affects the performance of a particular area, in our case, international transport, and macroeconomic indicators.

The digital economy is evolving, but there is no way to measure it yet. Oxford Economics has teamed up with Huawei to develop a new approach to measuring the impact of digital technology on economic performance. The digital economy accounted for 15.5% of world GDP in 2019.

Digitalization is radically changing traditional industries and sectors of the economy. There is a change of classic business models, analog processes and operations flow into the Internet, it is possible to form personal proposals for each individual client. Automation and robotics minimize the need for human resources, rapidly increasing efficiency and productivity.

Examples: Alibaba does not trade, Uber does not own any machines, Amazon does not have physical stores. The port of Rotterdam is being transformed into a single digital space with the help of IoT (Internet of Things). The port is equipped with "digital dolphins" - intelligent sensors that provide support for traffic flows, including transportation. "Dolphins" are capable of self-learning, their basis - neural networks.

Radical changes are taking place in those industries that are considered basic for Ukrainian industry - metallurgy, oil and gas, energy, agriculture and more.

Examples: steelmaker ThyssenKrupp introduces cobots in its plants. Oil and gas company BP actively uses IoT to monitor the condition of its wells. Shell operates the Sensabot system - remotely controlled robots capable of operating in locations dangerous to humans. In the agricultural sector, special works are being created that will be able to destroy weeds without the use of pesticides.

Digitalization creates new sectors and segments, as well as new professions. According to the Ukrainian Institute of the Future, up to 60% of value added in Ukraine in 2030E will be created in new high-tech sectors of the economy, such as artificial intelligence, robotics, bioengineering, 3D printing, nanomedicine and others. In the future, 65% of our children will engage in activities that do not yet exist today.

The digital economy is not a separate sector of GDP, as, for example, industry is a platform that permeates all sectors of the economy, radically changes them, changes

the very structure of the Ukrainian economy, creates new segments and even industries.

The impact of digitalization is determined by the added value it creates for each sector of the economy or sphere of life at the macroeconomic level, or for a specific product or service - at the micro level.

The main effect of digitalization is a change in value chains (Fig. 3.9). Technology and digitalization will displace people from their usual processes - production, services, entertainment, trade, education and even medicine.



Fig. 3.9. The main effect of digitalization

At the same time, the return on investment (ROI) in the business will dramatically increase. According to Digital Spillover, the ROI for digital technologies is 6.7 times higher than for traditional ones.

According to research in the Digital Spillover report, every dollar invested in digital technology causes GDP growth of \$ 20, ie the investment multiplier is 20. For comparison: the multiplier of traditional investment (non-digital) is 2-8 (depending on the industry) [80]. The main effects that are assessed from digitization are presented in table 3.1.

There are different approaches in the world to assess the impact of digitalization on GDP growth, as well as to assess the size of the digital economy, but a unified methodology does not yet exist.

Official statistics (Ukrstat) do not calculate the size of the digital economy in Ukraine. Therefore, we made our own estimates based on numerous studies by international organizations.

The macroeconomic effect can be assessed through the assessment of the impact of investment in digital technologies and the impact of digital infrastructure on GDP (Table 3.2), as well as through the assessment of productivity growth through digitalization (Fig. 3.10).

Table 3.1

Effects of digitalization for the economy of Ukraine and the budget

Indicator	2021E	2025E	2030E	Total in 2021–2030EE
Investment in digital infrastructure, \$ billion	0,7	3 ,0	6,0	16,0
Investments in digitalization of production, business, industry, \$ billion	1,5	5,0	14,0	70,0
Increase in productivity due to digitalization,%	+1,1	+13,0	+13,0	-
Additionally created GDP due to digitalization, \$ billion (only the effect of investment and productivity)	17,0	93,0	280,0	1 260,0
- additional GDP in%	+11	+44	+95	
Additional budget revenues, \$ billion	3,2	17,0	50,0	240,0
Number of jobs created (excluding the export IT industry), persons	150 000	300 000	700 000	
Share of digital economy in Ukraine (in total GDP),%	3,0	15,0	65,0	-

Source: compiled by author based on [84]

Table 3.1 and 3.2 show only some of the expected effects and benefits for the Ukrainian economy from its digitalization. Although the real results may be even more impressive. After all, people think linearly, and changes occur exponentially.

Table 3.2

Effects of digitalization for Ukrainian business

Indicator	indicator value
growth of industrial production	by 7-10% per year
growth of high-tech segments	up to 20% per year
increasing the capacity of production	up to 60%
increase in the number of orders executed on time	up to 95%
reduction of stocks	up to 20%
saving on purchase costs	up to 30%
reduction of equipment downtime	up to 22%
increasing the efficiency of the installed equipment	up to 15%
additional investment in the country in the development of Industry 4.0	up to 10%



Fig. 3.10. Effects of digitalization for citizens

Source: compiled by author based on [80]

Thus, in the development of the digital economy, the processes of international cargo delivery are changing dramatically, because the model of the relationship of participants in the supply chain of transport services to the world market is changing radically. Unfortunately, the Ukrainian freight market, which has innovative solutions at the level of the best world trends, remains quite conservative and traditional, so it is too early to talk about mass digitalization and uberization for Ukraine, much will

depend on macro-transport policy and Internet penetration. In Ukraine, unfortunately, even 3G does not have a massive quality coverage, not to mention 4G, which has long completely covered the markets of the world.

Studies have once again convinced that the competitiveness of the transport and logistics business requires a focus on speed and reliability and requires a radical overhaul of the entire model of international freight delivery, taking into account current trends in the digital economy.

Directions for the development of international freight transport in Ukraine were proposed as a guarantee of international trade and, accordingly, the national economy, the main of which are: functional improvement and promotion among potential users of the centralized transport portal created by the Ministry of Infrastructure; "Uberization" of the cargo delivery process; divergence (diversity) of IT products in the transport sector; creation of "transport aggregators".

In order to stimulate the transport business to switch to digital technologies, it is necessary to introduce centralized online platforms at the macro level. To this end, Ukraine has taken the first step and launched a transport portal for electronic services, which combines electronic services in all areas of the transport industry into one smart system.

Through the transport portal it is now possible to carry out all operations related to the licensing of road transport, booking permits for international transport of goods, obtaining permits for oversized transport, popular news in the field of transportation.

But, unfortunately, the transport business is mostly conservative, so it is necessary to conduct a strong explanatory and educational work among potential users of this system. To this end, the study clearly identified the main benefits and effects for users of the transport portal in terms of individual functions, in particular, the expected effects of obtaining through the transport portal permits for international transport, permits for oversized transport

The transition to e- consignment note can be considered a strategic priority №1 to improve the system of international cargo delivery. This will help ensure the

competitiveness of the Ukrainian transport and logistics industry. The paper proposes the stages of implementation of the pilot project, the effect and expected results from the implementation of e- consignment note.

Assessing the macro-effects of digitalization of the international freight delivery process for key stakeholders revealed that the main effect of digitalization is a change in value chains.

The recommended section of the paper presents the expected effects and benefits of digitalization of international cargo delivery for different groups of stakeholders: for the Ukrainian economy as a whole, for the transport business and for the citizens of Ukraine. Although the real results may be even more impressive.

SUMMARY

<i>Air Transportation Management Department</i>				<i>NAU.20.03.97 004EN</i>				
Done by:	<i>Hlushchenko Mykyta</i>			SUMMARY	Letter	Sheet.	Sheets	
Supervisor:	<i>Yuliia V. Shevchenko</i>					D	105	5
Standards Inspector	<i>Yuliia V. Shevchenko</i>				<i>FTML 275 ОП- 202Ма</i>			
Head of the Department	<i>Shevchuk D. O</i>							

In the thesis work as a result of theoretical and analytical studies the main aspects of Organization of international cargo delivery in a digital economy have been formulated.

The theoretical part identifies the conceptual features of the digital economy; the peculiarities of the organization of international delivery of goods in the digital economy and the conditions of international delivery of goods in accordance with the new rules of Incoterms 2020 are described.

The study clarifies the essence of the interpretation of the digitalization process as an economic phenomenon and a synthetic economic category; identified technological trends in the formation of the digital economy (development and practical application of mobile technologies, business intelligence, the use of cloud computing and social networks); identified and characterized the main elements of the digital transformation of the economy, the priority of bridging the digital divide in Ukraine and the principles of economic transition to the technology of "4.0".

Generalization and characterization of factors influencing the development of the transport and logistics industry today, led to the conclusion that digitalization will be the main tool for transforming the transport and logistics sector of the economy and achieving Ukraine's strategic goal - to increase GDP by 8 times to \$ 1 trillion.

Of practical importance for business is the detailed and structural analysis of changes in the conditions of international cargo delivery in accordance with the new rules of Incoterms 2020, the main of which are: removal of the term EXW (self-pickup) from the rules of Incoterms and FAS (free along the ship); division of the term FCA (ex-carrier) into two bases of delivery; change of FOB and CIF delivery conditions for container transportation; the emergence of a new term in Incoterms 2020 - CI (Cost and Insurance); two new rules in Incoterms 2020, based on the terms of delivery of DDP; the DAT term is renamed to the DPU delivery terms.

In the analytical part of the work the analysis of the state and tendencies of development of the market of international transport services in Ukraine was carried out; assessment of the competitive situation on the Ukrainian market of the

organization of international cargo delivery; the characteristic of information online platforms of the organization of the international deliveries of freights is given.

The study of the domestic market of international transportation was conducted in three areas. First, the state and trends of the international transport services market in Ukraine were analyzed. Secondly, the competitive situation in the Ukrainian market of international cargo delivery was assessed, in particular, the advantages and disadvantages of the main delivery services operating in the Ukrainian market and offering international cargo delivery services were assessed. Third, digital solutions in the organization of international cargo deliveries were characterized, which are already implemented at the macro level, taking into account global trends.

The Ukrainian market of transport services is attractive for foreign investors, and this already indicates the potential for its development. The largest investors in the Ukrainian market of transport services (TS) are Cyprus (29.1%), Germany and the Netherlands (13.4% each).

In the structure of export-import operations, despite the decrease in exports of TA, a larger share in the overall structure of export-import TA belongs to export deliveries (80%), which is certainly a positive factor. In addition, despite the war with Russia, more than half of Ukraine's export transport services (53.6%) are with the Russian Federation. Russia also accounts for 10% of imports of transport services.

Ukraine is among the top 10 European countries in terms of road freight turnover, but Ukraine has great potential to reach the level of Poland, which in 2017 took first place in Europe in terms of road freight turnover.

There are many companies on the Ukrainian market that provide international cargo delivery services. The nature and range of their activities are very different. The study focused on delivery services that work with online stores. Assessment of the competitive situation in the Ukrainian market of international cargo delivery based on the results of a questionnaire survey of online stores that constantly use different delivery services.

As expected, the most popular delivery service was Nova Poshta. It is used by 97% of respondents, which is almost three times higher than the result of its closest

competitor - Ukrposhta (33%). Nova Poshta also became the leader in the share of goods sent by online stores with delivery services (64%) and the results of the level of customer service (8.4 points out of 10 possible). However, despite the leadership in the domestic delivery market of Nova Poshta, in 2018 Ukrposhta consolidated its leading position in the international delivery market. The company processed 34.4 million international import and export shipments, which is almost 45% more than in 2017. In general, the company's revenues from international operations increased by 37%.

One of the main advantages of any logistics company today is the software products they implement to automate their business processes.

The study focused on the analysis of the strategic role of transport exchanges as an online platform for information exchange in the supply chain of transport services to world markets. The characteristics of the main transport exchanges presented on the market of Ukraine and the main IT-solutions that transport exchanges offer to their users are presented.

The results of user surveys by transport exchanges in Ukraine are presented. According to survey data, the most popular are Lardi trans (81.8%), Della (50.0%), Trans (22.7), Degruz (18.2), Cargo (13.6). Among which 3 companies are purely Ukrainian (Lardi trans, Della and Degruz). 73% of respondents said that they use the services of transport exchanges every day in planning their activities

The introduction of digital solutions in the management of the transport sector will allow Ukraine to integrate into a single transport network with Europe and Asia, and turn Ukraine into an international transport hub.

Studies have once again convinced that the competitiveness of the transport and logistics business requires a focus on speed and reliability and requires a radical overhaul of the entire model of international freight delivery, taking into account current trends in the digital economy.

Project part of the work suggests ways to develop the transport portal of electronic services; recommended the introduction of an electronic consignment note as a mandatory prerequisite for the digitalization of international cargo delivery;

macro-effects from digitalization of international cargo delivery process for key stakeholders

Directions for the development of international freight transport in Ukraine were proposed as a guarantee of international trade and, accordingly, the national economy, the main of which are: functional improvement and promotion among potential users of the centralized transport portal created by the Ministry of Infrastructure; "using Uber's principle" of the cargo delivery process; divergence (diversity) of IT products in the transport sector; creation of "transport It-platform".

In order to stimulate the transport business to switch to digital technologies, it is necessary to introduce centralized online platforms at the macro level. To this end, Ukraine has taken the first step and launched a transport portal for electronic services, which combines electronic services in all areas of the transport industry into one smart system.

Through the transport portal it is now possible to carry out all operations related to the licensing of road transport, booking permits for international transport of goods, obtaining permits for oversized transport, popular news in the field of transportation.

But, unfortunately, the transport business is mostly conservative, so it is necessary to conduct a strong explanatory and educational work among potential users of this system. To this end, the study clearly identified the main benefits and effects for users of the transport portal in terms of individual functions, in particular, the expected effects of obtaining through the transport portal permits for international transport, permits for oversized transport

Another important step towards the transformation of the process of international cargo delivery should be considered the abandonment of the paper consignment note, which is an anachronism and only hinders and slows down the development of the transport and logistics business. The transition to e- consignment note can be considered a strategic priority №1. This will help ensure the competitiveness of the Ukrainian transport and logistics industry.

The paper proposes the stages of implementation of the pilot project, the effect and expected results from the implementation of e- consignment note.

Assessing the macro-effects of digitalization of the international freight delivery process for key stakeholders revealed that the main effect of digitalization is a change in value chains.

The digital economy is not a separate sector of GDP, as, for example, industry is a platform that permeates all sectors of the economy, radically changes them, changes the very structure of the Ukrainian economy, creates new segments and even industries. The impact of digitalization is determined by the added value it creates for each sector of the economy or sphere of life at the macroeconomic level, or for a specific product or service - at the micro level.

The recommended part of the thesis presents the expected effects and benefits of digitalization of international cargo delivery for different groups of stakeholders: for the Ukrainian economy as a whole, for the transport business and for the citizens of Ukraine. Although the real results may be even more impressive.

REFERENCES

1. Апалькова В.В. Концепція розвитку цифрової економіки в Євросоюзі та перспективи України. Вісник Дніпропетровського університету. Серія: Менеджмент інновацій. 2015. № 23. Вип. 4. С. 9–18.
2. Біла книга Європейської комісії. План розвитку єдиного європейського транспортного простору на шляху до конкурентоспроможної та ресурсоефективної транспортної системи. Люксембург : Видавництво Європейського Союзу, 2017. 28 с.
3. Бірюкова Т. В. Співпраця Європейського Союзу та України у сфері транспорту // Держава та регіони. Серія: Економіка та підприємництво. 2016. № 5. С.10-14.
4. Брайковська А. Дослідження особливостей формування ринку транспортних послуг як середовища підприємств транспорту // Економіст, №9. 2012. С.50-54.
5. Без паперу: як впровадження електронної ТТН вплине на рітейл і логістику. URL : <https://rau.ua/novyni/bez-papery/>
6. Вагон Инфо. URL : <http://vagon.info>.
7. Вантажний Uber. URL : <https://freight.uber.com/>
8. Веретюк С.М., Пілінський В.В. Визначення пріоритетних напрямків розвитку цифрової економіки в Україні. Наукові записки Українського науково-дослідного інституту зв'язку. 2016. № 2. С. 47–58.
9. Воронкова В.Г., Романенко Т.П. Концепція розвитку проектно-орієнтованого бізнесу в умовах цифрової трансформації до smart-суспільства. Гуманітарний вісник Запорізької державної інженерної академії. 2016. № 67. С. 13–27.
10. В Україні створено транспортний портал електронних послуг. URL : <https://www.kmu.gov.ua/news/v-ukrayini-stvoreno-transportnij-portal-elektronnih-poslug>

11. Галкін А. С. Щодо оцінки ефективності перевезень вантажів однотипними автотранспортними засобами //Технологический аудит и резервы производства. 2016. 6/3 (14). С. 4-6.

12. Галкін А. С., Тараненко О. М. Дослідження часу доставки вантажу з урахуванням різних графіків роботи пунктів навантаження і розвантаження // Комунальне господарство міст. 2016. № 110. С. 244-248.

13. Горбенко А. Вантажні автомобільні транспортні біржі в Україні : поточний стан і тенденції. URL : ogist.fm/publications/vantazhni-avtomobilni-transportni-birzhi-v-ukrayini-potochniy-stand-i-tendenciyi

14. Григорьев М. Н., Уваров С. А. Логистика : учебник для бакалавров. — 3-е изд., перераб. и доп. М. : Издательство Юрайт, 2015. 825 с.

15. Грибик І. І. Економіка та управління підприємством: теорія і практика : навч. посіб. К. : Ліра-К, 2017. 428 с.

16. Гурнак В., Ананченко О., Гурнак М. Реалізація Комплексної програми утвердження України як транзитної держави // Економіка України. 2017. № 7. С. 26–37.

17. Давидич Ю. А., Ольхова М. В. Исследование влияния параметров транспортного процесса на значение равноценного расстояния при магистральных грузовых перевозках в логистической системе // Совершенствование организации дорожного движения и перевозок пассажиров и грузов. Минск: БНТУ, 2016. С. 399–404.

18. Дорошук В. О. Сучасні підходи до вирішення поставлених задач в економіці транспорту. Ефективна економіка № 11, 2016. URL : <http://www.economy.nauka.com.ua/?op=1&z=5268>

19. Єдина транспортна система: Навчальний посібник /Ю.В.Соболев, В.Л.Дикань, О.Г.Дейнека, І.М.Писаревський, Л.О.Поздянкова. Х.: ООО «Олант», 2002. 288с.

20. Івасишина Н.В. Підвищення ефективності міжнародних автомобільних перевезень вантажів. - Дисертація на здобуття наукового ступеня кандидата

економічних наук зі спеціальності 08.06.01 – економіка, організація та управління підприємствами. Київ: НТУ, 2002. 243 с.

21. Зайцев Е. И. Информационные технологии и системы в логистике и управлении цепями поставок: Информационный материал. СПб. : Питер, 2016. 96 с.

22. Застосування моделей і методів ергономіки і логістики в транспортних системах : монографія /В. К. Доля, Ю. О. Давідіч, О. О. Лобашов та ін.; за ред. В. К. Долі. Харк. нац. ун-т міск. госп-ва ім. О. М. Бекетова. Харків : Видавництво «Лідер», 2016. 316 с.

23. Інкотермс 2020: особливості можливого застосування. URL: <http://www.visnuk.com.ua/uk/news/100015209-inkoterm-2020-osoblivosti-mozhlivogo-zastosuvannya-1>.

24. Карпенко О.О. Логистика с умом: киевская команда создала софт для перевозчиков, способный экономить миллионы // Ain.ua. URL : <https://ain.ua/2015/04/30/logistika-s-umom-kievskaya-komanda-sozdala-soft-dlya-perevozchikov-sposobnyj-ekonomit-milliony>

25. Карпенко О. О. Європейський вектор кластеризації транспортно-логістичних підприємств у площині інформаційно-комунікаційних технологій. Монографія. К. : ТОВ «СІК ГРУПІ Україна», 2017. 252 с.

26. Катерна О.К. Інтелектуальні транспортні системи як інструмент економічного зростання країни // Стратегія розвитку України (економіка, соціологія, право). К.: НАУ, 2013. №1. С. 96-98.

27. Кібік О.М., Котлубай В.О., Хаймі Ю.В. Стратегічні інструменти розвитку українського експорту транспортних послуг // Actual problems of globalization: Collection of scientific articles. Midas S.A., Thessaloniki, Greece, 2016. P. 40–43.

28. Козіна К. Г. Аналіз ринку міжнародних автотранспортних вантажних перевезень : сучасний стан та перспективи розвитку. URL: <http://www.vestnik-econom.mgu.od.ua/journal/2015/10-2015/30.pdf>

29. Коляденко С.В. Цифрова економіка: передумови та етапи становлення в Україні і у світі. Економіка. Фінанси. Менеджмент: актуальні питання науки і практики. 2016. № 5. С. 105–112.

30. Контейнер Трекер. URL: <https://www.searates.com/ru/container/tracking>

31. Концепція АППАУ «Національна стратегія Індустрії 4.0»

32. Корнійко Я.Р. Сучасний розвиток транспортної системи України. URL : <http://jrnl.nau.edu.ua>

33. Котлубай В.О. Розвиток стратегічних напрямів зовнішньоторговельної політики України // Сучасні напрямки розвитку економіки і менеджменту на підприємствах України : збірник матеріалів II всеукраїнської науково-практичної конференції (26 жовтня 2016 р.). Харків, 2016. С. 549–551.

34. Кудрицька Н.В. Транспортно-дорожній комплекс України: сучасний стан, проблеми та шляхи розвитку. К. : НТУ, 2016. 338 с.

35. Криклій В. Товарно-транспортна накладна: «цифра» замість паперу. URL : <https://www.epravda.com.ua/columns/2020/01/14/655748/>

36. Малик І.П. Тенденції розвитку інформаційної економіки в Україні. Вісник Східноєвропейського університету економіки і менеджменту. Сер.: Економіка і менеджмент. 2013. № 1. С. 25–34.

37. Маловичко А.С. Роль, місце і значення експорту транспортних послуг у міжнародній і зовнішній торгівлі. URL : http://trade.donnuet.education/download/2017/31_1/Malovich.pdf

38. Маловичко А.С. Експорт транспортних послуг у міжнародній і зовнішній торгівлі URL : http://econa.at.ua/Vypusk_8/p1/malovichko.pdf

39. Мандрик І. П., Маковецька Л.О. Перспективні напрями розвитку транспортної системи України в контексті процесів європейської інтеграції economies . URL : http://archive.nbuv.gov.ua/portal/natural/nvnu/misnarod_vidnos/2009

40. Маркетинг і логістика : концептуальні основи та стратегічні рішення: Навч. посібник у схемах і таблицях /За заг.ред. проф. С. В. Смерічевської.

Львів. «Магнолія-2013». 2019. 552 с. URL : <http://er.nau.edu.ua:8080/handle/NAU/38702>

41. Матюшко В.І. Аналітичне дослідження. Широкосмуговий доступ до Інтернету в Україні: стан та перспективи. Intel. 2012, 146 с.

42. Мировой рынок электронной коммерции по итогам 2017 года вырастет на 17%. Retail & Loyalty news. URL: <https://www.retail-loyalty.org/news/mirovoy-rynok-elektronnoy-kommertsii-vyrastet-po-itogam-2017-goda-na-17>.

43. Міжнародні перевезення : теорія та практика : навч. посібник. Кн. 1. / А. С. Галкін, В. П. Левада, Ю. А. Давідіч, Н. В. Давідіч, К. Є. Вакуленко. Харків : ХНУМГ ім. О. М. Бекетова, 2018 . 182 с.

44. Нікітін П.В. Ефективність логістичного управління перевезеннями вантажів в умовах взаємодії різних видів транспорту : моногр. К. : Вид. Дім Д. Бураго, 2008. 101 с.

45. Нові правила Інкотермс 2020. URL: <http://www.compet.kh.gov.ua/ukr/2443-novi-pravila-inkoterms-2020>

46. Новый Инкотермс 2020, изменения в условиях поставок. URL: <https://anvay.ru/incoterms-2020>

47. Обзор украинских служб доставки. URL : <https://horoshop.ua/blog/obzor-ukrainskikh-sluzhb-dostavki/>

48. Обзор европейских транспортных бирж // Карголинк Биржа – 26.04.2015 URL : <https://cargolink.ru/ls/blog/1288.html>

49. Опрос: «ТОП-5 транспортных бирж в Украине» URL : https://docs.google.com/forms/d/e/1FAIpQLSd--5syjlc6o9o67U7033yWvG60WJV9hwkpaJcggT-pe-3wrQ/viewform?usp=sf_link

50. Офіційний сайт Державної служби статистики України. URL : <http://www.ukrstat.gov.ua/>

51. Офіційний сайт компанії «Нова пошта». URL : <https://novaposhta.ua>

52. Офіційний сайт «EUROPLATFORMS» URL : <http://www.europlatforms.eu>

53. Офіційний сайт Міжнародного транспортного форуму. URL : <http://www.internationaltransportforum.org/>

54.Офіційний сайт Міністерства інфраструктури України. URL : <http://www.mtu.gov.ua/uk/news/33388.html>.

55.Офіційний сайт Укрпошти. URL : <https://www.ukrposhta.ua/>

56.Партола А. І. Аналіз транспортно-логістичного комплексу України //Науковий вісник Ужгородського національного університету URL : <https://dspace.uzhnu.edu.ua/jspui/bitstream/lib/12433/>

57. Правове регулювання транспортних коридорів в Європейському Союзі та в Україні : порівняльно-прав. дослідж. / [В.А. Андрєєнков та ін.; наук. ред. Дідик В.Г.]; М-во юстиції України, Держ. департамент з питань адаптації законодавства. К.: Центр учб. л-ри, 2007. 244 с.

58.Пора прогрівати двигуни: тенденції українського ринку міжнародних перевезень вантажним транспортом. URL: <https://pro-consulting.ua/ua/pressroom/pora-progrevat-dvigateli-tendencii-ukrainskogo-rynka-mezhdunarodnyh-gruzoperevozok-avtomobilnym-transportom>.

59. Прейгер Д.К. Реалізація потенціалу транспортної інфраструктури України в стратегії посткризового економічного розвитку. К. : НІСД, 2017. 36 с.

60.Про реалізацію експериментального проекту щодо впровадження електронного документообігу електронної товарно-транспортної накладної. Розпорядження Кабінету Міністрів України від 27 грудня 2019 р. N 1392-р. URL: http://search.ligazakon.ua/l_doc2.nsf/link1/KR191392.html

61.Про транзит вантажів. Закон України від 20.11.2003 р. URL: <https://zakon.rada.gov.ua/laws/show/1172-14>

62. Розпорядження КМУ від 17 січня 2018 р. №67-р «Про схвалення Концепції розвитку цифрової економіки та суспільства України на 2018–2020 роки та затвердження плану заходів щодо її реалізації»

63. Самойленко В.М. Географічні інформаційні системи та технології : підручник. К. : Ніка-Центр, 2016. 448 с.

64. Сирийчик Т., Фургаліські А., Клімкевич Ч. та інш. Транспортна політика України та її наближення до норм Європейського Союзу. К. : Аналітично-дорадчий центр Блакитної стрічки, 2016. 102 с.

65. Світова транспортна інфраструктура. URL : <https://neolit.ua/ua/articles/mirovaja-transportnaja-infrastruktura>
66. Сич Є.М., Кислий В.М. Закони економіки транспорту : монографія. Ніжин: Видавництво «Аспект-Поліграф», 2009. 157 с.
67. Січкаренко К.О. Цифровізація як фактор змін у міжнародних економічних відносинах // Приазовський економічний вісник. Випуск 3(08) 2018. С.30-34. URL : http://rev.kpu.zp.ua/journals/2018/3_08_uk/8.pdf
68. Смена парадигмы. Будущее транспортно-логистического сектора. URL: <https://www.pwc.ru/ru/publications/paradigm-shift.html>
69. Смерічевська С.В. Стан та перспективи цифровізації транспортно-логістичної галузі // Проблемы подготовки профессиональных кадров по логистике в условиях глобальной конкурентной среды ХУ МНПК 25-26 октября 2019 г. Сборник докладов. К.: НАУ, 2019. С.114-117
70. Смерічевська С. В. Методологічні засади просторової організації економіки в умовах глобалізації // Проблеми системного підходу в економіці: Збірник наукових праць НАУ - К.: Видавничий дім «Гельветика». Випуск 3 (65), 2018 (Частина 1). С.138-143
71. Смерічевська С. В., Дорошкевич Д. В. Еволюція організаційних форм транспортної логістики // Ефективна економіка. 2013. №10. URL : <http://www.economy.nauka.com.ua/?op=1&z=4865>.
72. Стратегія розвитку «Індустрія 4.0».
73. Стратегические направления развития транспорта в Украине // Транспорт. URL : <http://transport-journal.com/news/stratheycheskyenapravlenyuua-razvytyuua-transporta-v-ukrayne/>
74. Стратегічний план розвитку автомобільного транспорту та дорожнього господарства на період до 2020 року URL : <http://mtu.gov.ua/files/pdf>.
75. Топ транспортних бирж в Україні. URL : <http://gs.com.ua/ru/top-transportnyh-birzh-v-ukraine>
76. Транспортний портал електронних послуг. URL : <https://e-transport.gov.ua>

77. Транспортний агрегатор. URL : <https://cargofy.com/>

78. Транспортно-інформаційний сервіс. URL : <https://lardi-trans.com/uk/about/article/12/>

79. Транспортна політика України та її наближення до норм Європейського Союзу / За ред. Марчіна Свенчіцкі. К.: Аналітично-дорадчий центр Блакитної стрічки, 2016. 102 с.

80. Україна 2030Е - країна з розвинутою цифровою економікою. Український інститут майбутнього. URL: <https://strategy.uifuture.org/kraina-z-rozvinutoyu-cifrovoyu-ekonomikoju.html#6-2-1>

81. Укрінформ. Мультимедійна платформа іномовлення України. URL : <https://www.ukrinform.ua/rubric-kyiv/2260781-kiiiv-rozrobiv-koncepciu-povodzenna-z-tverdimi-vidhodami.html>.

82. Участь України на міжнародному ринку транспортних послуг. URL : <http://referat-ok.com.ua/mizhnarodna-ekonomika/osoblivosti-problemi-ta-zavdannya-ukrajini-na-rinku-mizhnarodnih-transportnih-poslug>

83. Федорчук В.В. Теоретичні підходи до оцінювання якості функціонування міжнародних транспортних коридорів // Вісн. Східноукр. нац. ун-ту ім. В. Даля. 2016. № 4, ч. 1. С. 157 – 161.

84. Цифрова адженда України – 2020 («Цифровий порядок денний – 2020»), - ГС «ХАЙ-ТЕК ОФІС УКРАЇНА», 2016.

85. Чередниченко О.Ю. Вплив зовнішніх та внутрішніх загроз на розвиток транспортного комплексу України // Вісник економіки транспорту і промисловості. Х.: УкрДАЗТ, 2008. Вип. 21. С. 137 – 141.

86. Чорток Ю .В., Євдокимов А. В., Родимченко А. О. Логістичні стратегії та логістичні процеси на торговельних підприємствах // Сталий розвиток економіки. Вип. 1 (1). 2012. С.246-249.

87. Чужиков В.І. Транспортна політика ЄС: соціальний аспект // Україна: аспекти праці. 2016. № 1. С. 7-15.

88. Економетрична модель (бета-версія комп'ютерної емуляції економіки України). URL: <https://model.uifuture.org/>

89. Digital Trade and Its Impacts on Foreign Trade in Services. URL: http://www.mdic.gov.br/images/REPOSITORIO/scs/decin/Eventos/Joshua_Meltzer.pdf.

90. Galkin A. The Role of Consumers in Logistics Systems / A. Galkin, C. Dolia, N. Davidich // Transportation Research Procedia. – 2017. – T. 27. – C. 1187–1194.

91. Kaplan S. Business Model Innovation Factory: How to Stay Relevant When the World Is Changing / S. Kaplan. - N.Y.: Wiley, 2012. - P. 256

92. Logistics Trend Radar. Version 2018/19 URL: <https://www.logistics.dhl/global-en/home/insights-andinnovation/thought-leadership/trend-reports/logisticstrend-radar.html>

93. Oxford Economics. URL : <https://www.oxfordeconomics.com/recent-releases/digital-spillover>

94. Smerichevska S., Martynenko O. Improvement of Transport–Logistic Support for Development of Export Potential of Ukraine // Social and Economic Aspects of Education in Modern Society. Proceedings of the XIII International Scientific and Practical Conference (Vol.1, May 25, 2019). RS Global Sp.z O.O. Warsaw, Poland, 2019. P.17-22

95. International Trade Statistics 2011, Statistic database WTO // Source: <http://www.wto.org> Transport in Figures 2018.

96. World Trade Statistical Review 2018. URL : https://www.wto.org/english/res_e/statis_e/wts2018_e/wts2018_e.pdf

97. ULTRA / MANGO і сервіс MyFuel запустили систему групової покупки палива в інтернеті зі знижкою // Нефтерынок – 20.04.2017 URL : <http://www.nefterynok.info/uk/novini/ultra--mango--servs-myfuel-zapustili-sistemu-grupovo-pokupki-paliva-v-nternet-z-znijkoju>

98. Digital Technology. Encyclopedia.com. URL: <https://www.encyclopedia.com/history/dictionaries-thesauruses-pictures-and-press-releases/digital-technology> (reference date 06.04.2020)

99. 16 Advantages of Digital Technology. TurboFuture. URL: <https://turbofuture.com/computers/Advantages-of-Digital-Technology> (reference date 06.04.2020)

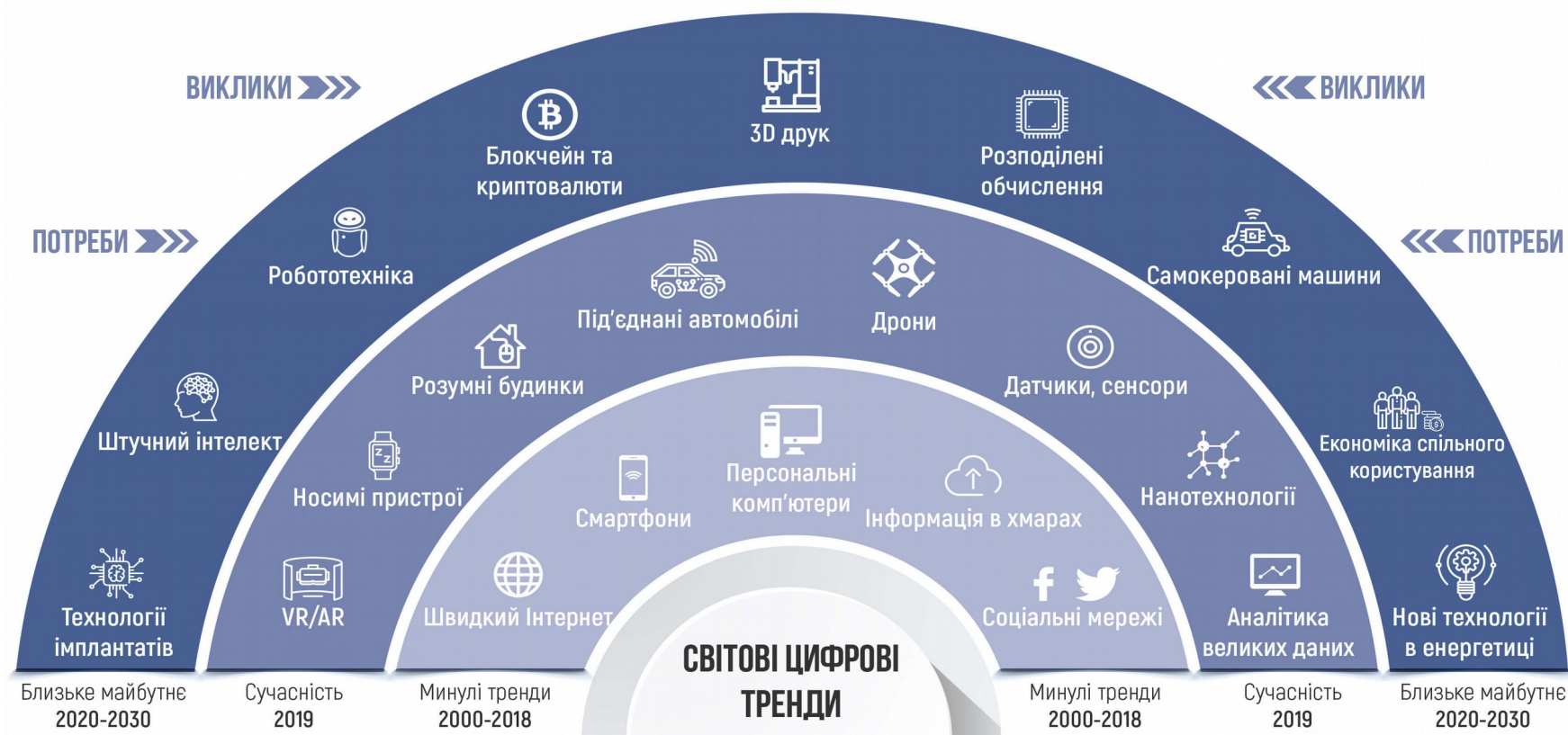
100. Mesenbourg, T.L. Measuring the Digital Economy, US Bureau of the Census, Suitland, MD. URL: <https://www.census.gov/content/dam/Census/library/workingpapers/2001/econ/umdigital.pdf> (reference date 06.04.2020)

Key trends in the digital transformation of the economy (as of 2019)



В ОСНОВІ ЦИФРОВИХ ТРАНСФОРМАЦІЙ - ЦИФРОВІ ТРЕНДИ

ЕФЕКТИВНІСТЬ, КОНКУРЕНТОЗДАТНІСТЬ ТА СТВОРЕННЯ НОВИХ ЦІННОСТЕЙ



Джерело: Цифрова адженда України

ЦИФРОВА ЕКОНОМІКА У ВВП, ЦИФРОВИЙ ВВП



OUTPUT

PERCEIVED DIGITAL ECONOMY

Digital output value as % of GDP

Trade volume



ICT sector



Other



GDP

0% 100%

Methodology

Measuring digital output value for Trade (B2C/B2B commerce) and ICT sector

SECTOR

REAL DIGITAL ECONOMY

Gross Digital Domestic Product as % of GDP

Medicine



Agriculture



Real estate



Education



Government



Trade



Industry



Construction



GDP

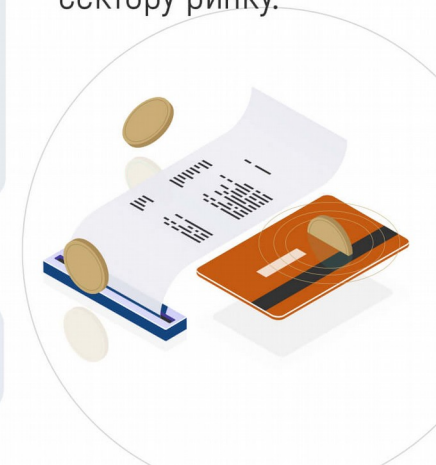
0% 100%

Methodology

Measuring digital value add (DVA) for every sector

Цифровий ВВП - % від загального ВВП.

У його основі - додана вартість, яку digital створює для кожного сектору ринку.



Appendix C

The state of digital transformations in Ukraine



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УКРАЇНА ПРОГРАЄ У СФЕРІ ЦИФРОВИХ ТРАНСФОРМАЦІЙ



ЦИФРОВА АДЖЕНДА УКРАЇНИ

- Розвиваємо електронне урядування
- Надолужуємо 10-річне відставання у мобільній цифровій інфраструктурі (3G)
- Є позитивні законодавчі ініціативи
- Є національні та регіональні цифрові лідери із відповідними ініціативами

10%

ЦИФРОВА КРАЇНА

ПОЗА ФОКУСОМ ЗАЛИШАЮТЬСЯ

90%

- Цифрова економіка, Індустрія 4.0, галузеві цифрові трансформації (Industry DX)
- Цифровізація сфер життя (освіта, медицина, безпека, екологія, транспорт + 15-20 критичних сфер)
- Цифрова (т.з. тверда та м'яка) інфраструктура та подолання цифрової нерівності та розриву
- Цифрове суспільство, цифрові права, цифрові компетенції, цифрове громадянство
- Цифровізація фізичної інфраструктури (Інтернет речей тощо)

Джерело: «Цифрова адженда України»

Appendix D

Ukraine's success strategy in the digital economy



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У ЧОМУ ПРОГРАЄМО? У ВИКОРИСТАННІ ТЕХНОЛОГІЙ: ГРОМАДЯНАМИ, БІЗНЕСОМ, ДЕРЖАВОЮ



Джерело: «Цифрова агенда України», Networked Readiness Index, ICT Development Index, Broadband Penetration Index

