



DIGITALIZATION AND INFORMATION SOCIETY. SELECTED ISSUES

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DIGITALIZATION AND INFORMATION SOCIETY. SELECTED ISSUES

Edited by Aleksander Ostenda
and Tetyana Nestorenko

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3.2. NON-CASH PAYMENT SYSTEMS IN THE CONDITIONS OF DIGITALIZATION

Today, in the total amount of money turnover of states, non-cash turnover covers about 90% of the total cash flow. The modern market of non-cash payments using digital technologies reduces the need for cash, accelerates the turnover of funds in the economy, reduces the cost of circulation of funds, promotes the accumulation and accumulation of funds, and under the influence of digitalization rapidly increases turnover. The widespread use of non-cash payments is also facilitated by the presence of an extensive infrastructure of payment system institutions, as well as the state's interest in their distribution⁵⁰⁶.

Recently in Ukraine there is a growing interest in digitalization, which translated from English means "digitization" or "digitalization" of information, which encourages the search for new theoretical and methodological approaches to effective management in conditions of digitalization, under which is understood as the transformation, penetration of digital technologies to optimize and automate business processes, increase productivity and improve communication with consumers⁵⁰⁷. Analysis of research papers has shown that digitalization is defined as:

- a way to bring any kind of information into digital form⁵⁰⁸;
- the process of converting a certain information field from analog to digital format for easier further use on modern electronic devices⁵⁰⁹;
- creation of a digital version of analog things on paper documents, video and photo images, sounds, ie the process of transferring information into digital form⁵¹⁰;
- the process associated with the tendency to bring into electronic form various types of any information⁵¹¹;
- the process of application of modern information and communication technologies by enterprises, which focuses on the transformation of existing business processes using the capabilities of modern information technologies⁵¹²;
- transformation, penetration of digital technologies for optimization and automation of business processes, increasing productivity and improving communication with consumers⁵¹³.

Thus, digitalization is considered from the standpoint of digitization of information and more broadly – from the standpoint of digital transformation of the economy through the introduction of information technology, which indicates that digitalization is becoming an environment that is constantly updated under the influence of technology and encourages change to adapt to this digital environment, which is currently being formed in the world, ie acts as a factor of change. Therefore, the digitalization of business can help overcome market barriers and the transition to a new modern segment of the economy. But studies of scientific approaches to digitalization and digitalization of the economy demonstrate the complexity of the process of adapting the positive experience of international companies in the activities of industrial enterprises⁵¹⁴.

⁵⁰⁶ Fedyshyn, M. & Vovk, M. (2021). Didzhytalizatsiia bezghotivkovykh rozrakhunkiv v umovakh pandemii covid-19. *Ekonomika ta suspilstvo*, (32).

⁵⁰⁷ Filyppova, S. V. (2020). Didzhytalizatsiia yak seredovyshe ta faktor zmin systemy upravlinnia pidpriemstvom. *Visnyk Khmelnytskoho natsionalnoho universytetu. Ekonomichni nauky*. № 6. S. 330-335.

⁵⁰⁸ Koliadenko, S. V. (2016). Tsyfrova ekonomika: peredumovy ta etapy stanovlennia v Ukraini ta sviti. *Ekonomika. Finansy. Menedzhment: aktualni pytannia nauky i praktyky*. № 6. S. 105-112.

⁵⁰⁹ Abakumenko, O. (2016). Didzhytalizatsiia bankivskoho sektoru Ukrainy. *Finansovi doslidzhennia*, № 1 (1) S. 69-75.

⁵¹⁰ Sokolova, H. B. (2018) Deiaki aspekty rozvytku tsyfrovoy ekonomiky v Ukraini. *Ekonomichni visnyk Donbasu*. № 1 (51). S. 92-96.

⁵¹¹ Stratehii vysokotekhnolohichnoho rozvytku v umovakh hlobalizatsii: natsionalnyi ta korporatyvnyi aspekty: monohrafiia / N. P. Meshko, O. M. Sazonets, O. A. Dzhusov ta in. *Donetsk: Yuho-Vostok*, 2012. 470 s.

⁵¹² Hudz, O. & Fediunin, S. (2019). Dydzhytalizatsiia, yak konkurentna perevaha pidpriemstv. «*Ekonomika. Menedzhment. Biznes*» № 3 (29). S. 18-24.

⁵¹³ Hrybinenko, O. M. (2018). Dydzhytalizatsiia ekonomiky v novii paradyhmi tsyfrovoy transformatsii. *Mizhnarodni vidnosyny. Seriia. Ekonomichni nauky*. № 16.

⁵¹⁴ Filyppova, S. V. (2020). Didzhytalizatsiia yak seredovyshe ta faktor zmin systemy upravlinnia pidpriemstvom. *Visnyk Khmelnytskoho natsionalnoho universytetu. Ekonomichni nauky*. № 6. S. 330-335.

It is known that more than 60% of the largest corporations around the world are working to develop their own digital transformation strategy. There is a steady increase in the number of requests for digitalization from domestic companies as well.

According to some studies, digitalization will be the main tool to achieve Ukraine's strategic goal, which is to increase GDP by 8 times, namely up to 1 trillion USD in 2030, and ensuring the well-being, comfort and quality of life of Ukrainians at a level higher than the European average⁵¹⁵.

On October 13, 2020, the Ukrainian Government and the Governor of the National Bank of Ukraine presented the results of new online services for bank customers. Yes, the service of transmission (or sharing) of digital documents has become one of the first in the world. Sharing e-passports in the Action application is a service that, in particular, allows citizens to identify their identity in the bank and provide their documents in digital format to open a bank account without leaving home. The service can be used both on the bank's online resources (mobile application or website) and in the regular branch of the bank. Access codes (QR code and barcode) are automatically generated on the client's smartphone and read in the bank. Then the client confirms the permission to transfer their own data from the Action, and the bank can provide the necessary service to the client⁵¹⁶.

Digitalization now gives a chance to at least partially smooth out the negative effects of the introduction of new information technologies while overcoming the effects of the crisis in the world economy. The domestic market of non-cash payments is no exception. Thus, the digitalization of non-cash payments is the transformation of non-cash payments and payments using digital technologies⁵¹⁷.

According to the Instruction on Non-Cash Settlements in Ukraine in National Currency, non-cash settlements are transfers of a certain amount of funds from payers' accounts to recipients' accounts, as well as transfers by banks on behalf of enterprises and individuals in cash to bank accounts. recipients of funds⁵¹⁸.

Non-cash payments are a link that directly connects each of the economic entities with the market environment, public finances and promotes participation in the production process, distribution and consumption processes. Non-cash payments help reduce the costs of circulation associated with cash settlements on the farm and minimize the amount of money that operates in circulation. In addition, the concentration of non-cash payment turnover in the credit system allows rational use of all temporarily free funds stored in bank accounts for the purposes of direct bank lending to market participants, significantly speed up payments, including through the introduction of the latest electronic means of communication. language.

The analysis of literature sources gives grounds to be convinced that non-cash payments are payments for business transactions without the use of cash, which is carried out through banks and other financial institutions in which the relevant accounts are opened.

The organization of non-cash payments is based on the following principles (Fig. 1).

It is important to note that the movement of non-cash means of payment and cash are interrelated. Thus, the company receives revenue for products sold, work performed or services provided by transferring money to a current account, ie non-cash. At the same time, the company that serves its bank has the opportunity to receive funds for the payment of wages to its employees and other payments (incentives, business trips) and cash for current needs and business expenses (this amount is limited by the bank)⁵¹⁹.

⁵¹⁵ Ukraina 2030e – kraina z rozvynutoiu tsyfrovou ekonomikou. Ukrainyskyi instytut maibutnoho. 2020.

⁵¹⁶ NBU ta Mintsyfry spilno pratsuiut nad tsyfrovizatsiieiu bankivskoi systemy Ukrainy. 2020

⁵¹⁷ Fedyshyn, M. & Vovk, M. (2021). Didzhytalizatsiia bezghotivkovykh rozrakhunkiv v umovakh pandemii covid-19. Ekonomika ta suspilstvo, (32).

⁵¹⁸ Instruksii pro bezghotivkovi rozrakhunky v Ukraini v natsionalnii valiuti, zatv. Postanovoju NBU vid 21. 01. 2004 № 22.

⁵¹⁹ Kulish, A. Yu. (2016). Stan ta analiz bezghotivkovykh rozrakhunkiv v Ukraini ta osoblyvosti yikh obliku na vitchyznianskykh pidpriemstvakh. International scientific journal. № 2. S. 116-119.

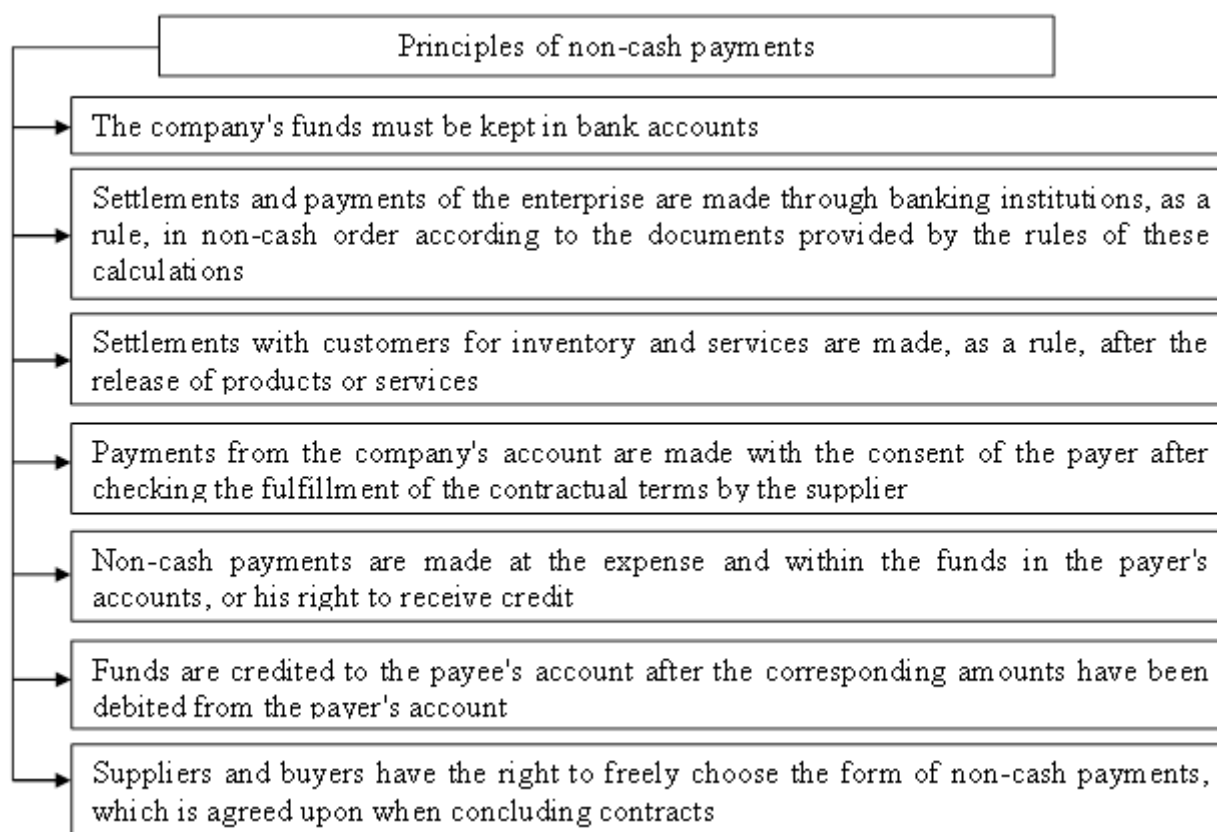


Fig. 1. Basic principles of non-cash payments⁵²⁰

In addition, companies, receiving a fee in the form of cash, make it to the bank to their current account. In the future, with the suppliers of products, with the budget for taxes, with centralized funds for mandatory deductions, with credit institutions on loans, they are paid in cash. In this case, cash circulation turns into non-cash.

Effective activity of economic entities in non-cash payments is achieved through:

- 1) improvement of commercial calculation at the enterprise;
- 2) increasing the responsibility of enterprises for the timely and full implementation of payments for all obligations;
- 3) constant search for new mechanisms for the organization of non-cash payments, which would allow on an economic basis to overcome the negative processes in the monetary sphere;
- 4) strengthening contractual discipline;
- 5) accelerating the turnover of funds.

It is worth noting that non-cash payments in general are characterized by a significant variety of both their types and features of implementation (Fig. 2).

The most common and simplest tool for non-cash payments in modern conditions is a payment order. It is used in the calculation of payments of commodity and non-commodity nature. Payments are made:

- 1) under the conditions of actually shipped products (performed works, provided services);
- 2) in advance;
- 3) to complete the settlement of acts of reconciliation of mutual indebtedness of enterprises;
- 4) for the transfer by enterprises of amounts due to individuals (wages, pensions, cash income of collective farmers, etc.) to their accounts opened in banking institutions;
- 5) in other different cases by agreement of the parties.

⁵²⁰ Tyshchenko, V. V. (2018). Vzaiemozviazok mizh rivnem bezgotivkovykh rozrakhunkiv ta efektyvnistiu finansovoho zabezpechennia diialnosti pidpriemstva. Visnyk Odeskoho natsionalnoho universytetu. Serii: Ekonomika. T. 23, Vyp. 2. S. 113-117.

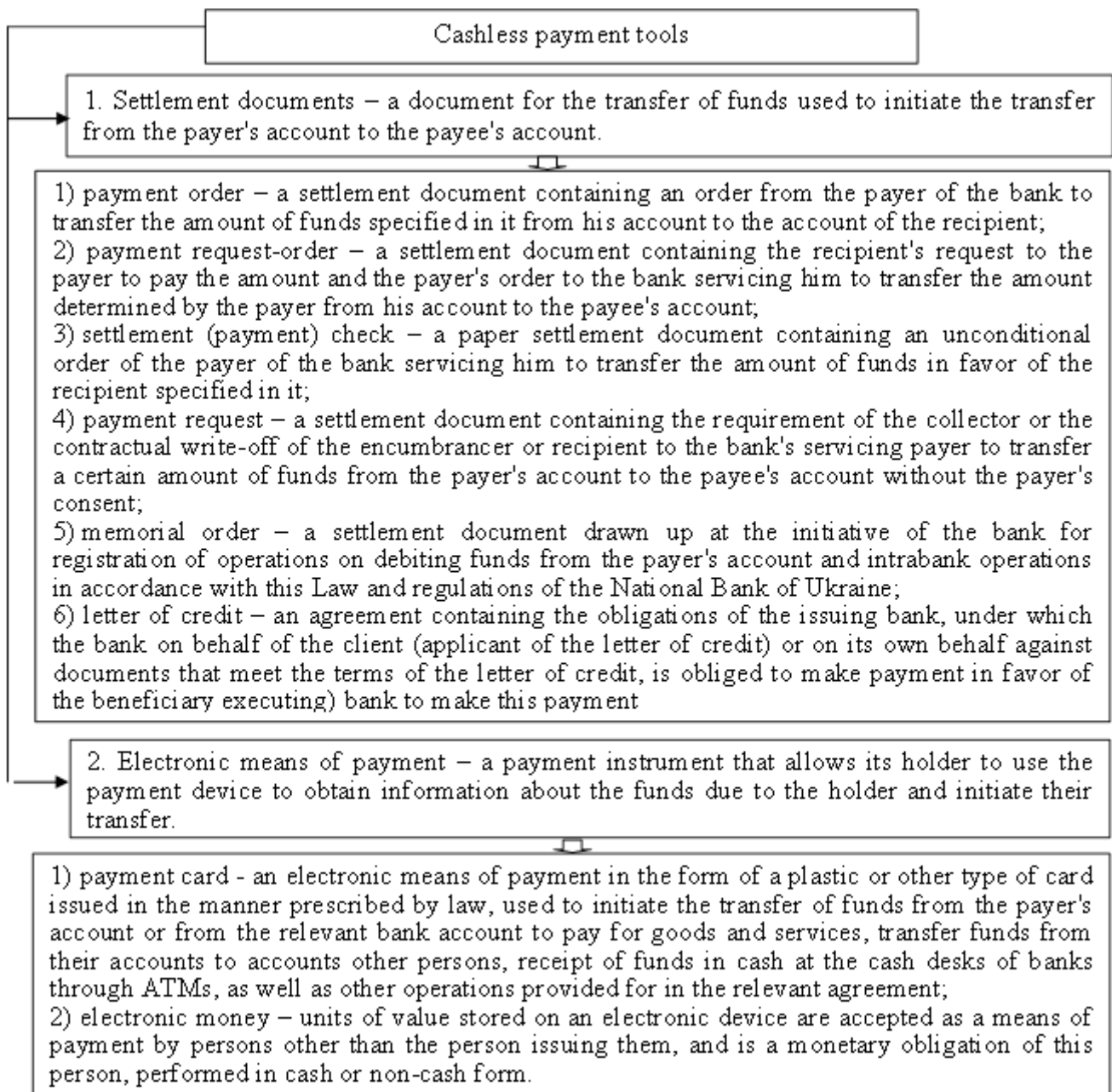


Fig. 2. Cashless payment instruments⁵²¹

Banks accept orders from payers only within the limits of available funds on their accounts. Payments by payment orders, in the practical activities of economic entities, are as follows (Fig. 3).

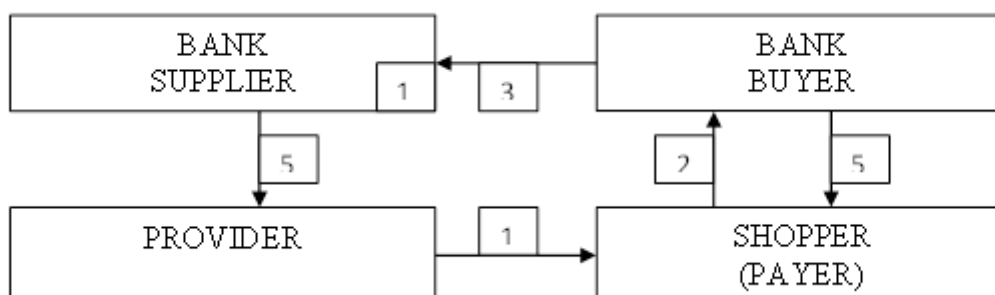


Fig. 3. Settlements using a payment order

⁵²¹ Інструкції про безготівкові розрахунки в Україні в національній валюті, затв. Постановою НБУ від 21. 01. 2004 № 22.

According to the scheme shown in Figure 3 for settlements using a payment order, we have to observe that:

1. The supplier ships the products (performs work, provides services) and issues an invoice.
2. The payer, having received the goods and the invoice from the supplier, sends the payment order to the servicing bank.
3. The payer's bank sends the documents on the transfer of funds to the account in the supplier's bank.
4. The supplier's bank shall credit the relevant amount to the supplier's account.
5. The supplier's bank shall submit to the supplier an extract from the current account on crediting funds, to which a copy of the payment order with the mark of the payer's bank shall be attached. The payer's bank informs the payer (buyer) about the write-off of funds.

Payment request-order is a combined settlement document, the feature of which is:

- 1) requirements of the supplier (recipient of funds) directly to the buyer (payer) to pay the cost of products supplied to him under the contract (work performed, services provided);
- 2) the payer's order to his bank to transfer the amount from his account to the supplier.

The request-order (upper part of the document) is filled in by the recipient of funds and sent directly to the payer. If you agree to pay the order, the payer fills in the lower part of this settlement document and hands it over to the bank that serves him. For the purpose of guaranteed accelerated delivery by the payer of claims-orders it is recommended to transfer them complete with settlement and unloading documents for the products delivered according to the contract (agreement) (performed works, rendered services, etc.). Payment requests-orders are accepted by banks within twenty calendar days from the date of issuance. The day of filling in the order-requirement is not taken into account. The Bank accepts payment orders in the amount that can be paid in cash on the payer's account.

Settlement checks are used to make non-cash payments between legal entities, as well as legal entities and individuals in order to reduce cash payments for goods, work performed and services rendered. This document contains a written order of the account holder (issuer) to the institution of the bank (issuing bank), which maintains his account, to pay the check holder the amount specified in the check. The check issuer can be a legal entity or a natural person who makes a payment with a check and signs it. Thus, to obtain a checkbook, the company must submit to the issuing bank "Application for receipt of checkbooks" in one copy. Settlements using a settlement check are displayed according to the following scheme (Fig. 4).

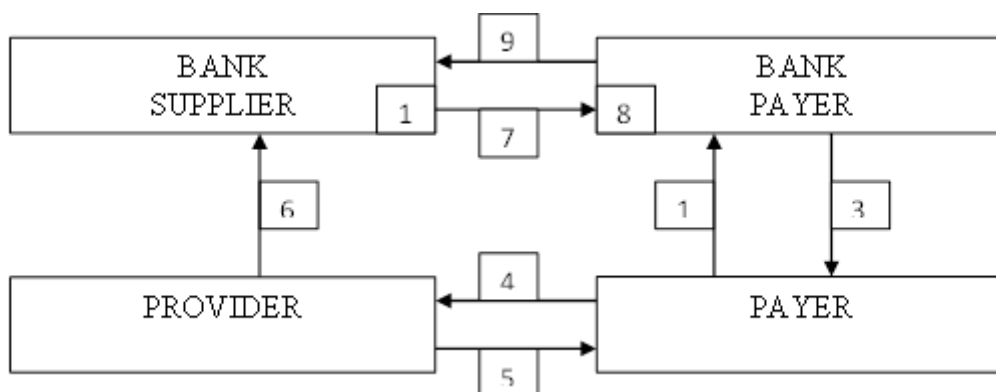


Fig. 4. Settlements using a settlement check

According to the scheme presented in Figure 4 for settlements using a settlement check, we have to observe that:

1. The payer submits to the issuing bank an application for a checkbook, as well as a payment order for the deposit of funds.
2. The issuing bank shall deposit funds in a separate analytical account "Check settlements".
3. The payer on the basis of the application receives a checkbook in his bank.

4. The payer, having received the supplier's invoice for goods or services, writes and transmits a check to the supplier.

5. The supplier ships the goods to the buyer.

6. The supplier shall submit to the servicing bank a check together with three copies of the registers.

7. The bank of the check holder, after checking the correctness of the register of check details and the timeliness of its submission for payment, accepts the check with the register and together with the second and third copies of the register collects the check to the issuing bank.

8. The issuing bank debits the amount of the check from the buyer's account to which it was deposited.

9. The issuing bank transfers funds to the account of the check holder.

10. The supplier's bank credits the amount indicated in the check to the supplier's account.

Checks from the checkbook are issued at the time of payment and are issued by the checker for the goods and services received by him. In this case, the check issuer transfers the balance balance from the "root" of the previous check to the "root" of the issued check and displays the new limit balance.

When paying for goods, works performed or services provided, the check holder checks the compliance of the check with the established sample, its validity, correctness, lack of corrections and compliance with the amount of the check root to the amount indicated on the check. It must have a clear stamp or seal of the bank and the name of the issuer. Unused checks after the expiration of the checkbook or expiration of the limit are subject to return to the issuing bank. In case the client terminates further payments by checks and has an unused limit on the checkbook before its expiration, the checker submits it to the bank together with a payment order to credit the unused balance balance to the account from which the funds were deposited.

Payment request is a settlement document by means of which an indisputable collection and write-off of funds from the payer's account is carried out without his consent, on the basis of documents submitted to the bank by the recipient of funds. Moreover, such recovery is carried out in cases provided by current legislation of Ukraine. Undisputed recovery of funds is carried out through the bank by debiting funds from the accounts of relevant enterprises (organizations). In this case, the original executive document or a duly executed duplicate shall be attached to the settlement document.

In addition, the payment request should be considered as an order of the recipient of funds (supplier) to transfer funds from the payer's account, which with the accompanying register is submitted by the collector (recipient) to the bank where he is served.

The right to collect and write off funds is indicated in the purpose of payment, which must be recorded in the payment request. The collector is responsible for the correctness of filling in all the data.

Payments are made according to the following scheme:

1. The recipient of funds writes out and submits to the institution of the bank that serves him, a payment request to the payer and a register of payment claims.

2. The payee's bank shall send the payment request and the payer's bank register.

3. The payer's bank shall issue a payment request to the payer and notify the payment.

4. On the basis of the verified payment request, the bank institution shall debit the specified amount from the payer's account.

5. The payer's bank receives documents on the transfer of funds to the recipient's bank.

6. The recipient's bank credits the specified amount to the recipient's account.

A letter of credit is essentially a contract that is separate from the contract of sale or other contract on which it may be based and is used for settlements between the supplier (beneficiary) and the applicant for the letter of credit (payer). In letter of credit transactions, all interested parties deal only with documents and not with goods, services or other types of performance of obligations to which these documents may be related. According to this form of payment,

the buyer transfers the money to the supplier's bank in order to keep it on the letter of credit until the beneficiary fulfills its obligations to the buyer.

At the international level and in Ukraine, transactions with letters of credit are regulated by the Unified Rules and Customs for Documentary Letters of Credit (UCP 600), developed and approved by the International Chamber of Commerce in 2007. In accordance with domestic law since 2017, Ukrainian companies letters of credit subject to the conclusion of an import agreement in the amount exceeding 5 million dollars. USA (equivalent to this amount at the official exchange rate of hryvnia to foreign currencies set by the NBU on the day of the contract). From 2018, the National Bank of Ukraine abolished the requirement to use the letter of credit form of payment when making an advance payment to a non-resident for domestic enterprises.

Thus, from 2018 in Ukraine, the use of the letter of credit form of payment remains at the discretion of the resident entity and depends on the legislation of the counterparty. In addition, a number of regulations have been adopted at the state level aimed at improving the organization of settlements using letters of credit. In particular, the Resolution of the Board of the National Bank of Ukraine of April 11, 2018 № 38 "On Amendments to Certain Legal Acts of the National Bank of Ukraine" provides:

1) reducing the number of instructional materials that regulated transactions with letters of credit;

2) granting permission to banks and enterprises that enter into a contract using a letter of credit to carry out the entire process of document management in electronic form.

This position of state bodies indicates their intention to encourage companies to use the letter of credit form of payment. The conditions and procedure for conducting the letter of credit form of payment are provided in the agreement between the beneficiary and the applicant of the letter of credit. Each letter of credit is intended for settlements with only one beneficiary and cannot be forwarded. To open a letter of credit, the company submits to the issuing bank an application completed in at least three copies. The statement indicates the terms of the letter of credit, which the bank can verify in writing. After accepting the application, the issuing bank determines the method of execution of the letter of credit and makes appropriate accounting entries. When opening a letter of credit deposited with the issuing bank, the applicant submits an application and a payment order for the transfer of funds from his account to the analytical account "Settlements on letters of credit".

The main obstacle when using the letter of credit form of payment is its significant cost, which affects the cost of goods purchased, for example, as a result of import transactions. Given that companies must constantly maintain the competitiveness of their products in the market, they try to avoid any additional costs that may reduce the efficiency of their operation. The use of a letter of credit form of payment may be appropriate provided that the negative consequences for the company of non-performance of the contract are much worse than the cost of bank fees and interest (subject to uncovered letter of credit) or loss of potential economic benefits from immobilization use of covered letter of credit).

For more detailed information and understanding of these types of letters of credit opened by the issuing bank, we present their definitions:

- covered letter of credit (deposited) is a letter of credit for which payments are made under which the funds of the paying company are reserved in advance in full on a separate account in the issuing bank or in the executing bank;
- uncovered (guaranteed) is a letter of credit, to cover which the funds of the banking institution provided to the paying company on loan terms are used;
- irrevocable letter of credit – a letter of credit that can not be revoked without the consent of the recipient of letters of credit⁵²².

It should be noted that the letter of credit form of payment is not widespread. The main deterrent to its use is its high cost. At the same time, at the state level, attempts are being made

⁵²² Kulyk, V. A. (2018). Oblik akredytyviv z urakhuvanniam vymoh mizhnarodnykh standartiv. Naukovyi visnyk Poltavskoho universytetu ekonomiky i torhivli. Serii: Ekonomichni nauky. № 2. S. 9-14.

to liberalize the letter of credit form of payment by simplifying the requirements for its application and giving companies the right to draw up all documents related to the use of letters of credit in electronic form. However, a significant advantage of the letter of credit form of payment is its reliability, which is especially important during the crisis in Ukraine, when most domestic companies are trying to conquer new foreign markets and do not yet have permanent, time-tested business partners.

Analysis of the economic literature and the practical use of the above types of non-cash payments, gives reason to believe in the existing advantages and disadvantages, due primarily to the role played by means of payment in the economic activities of enterprises (Table 1).

Table 1. Advantages and disadvantages of non-cash payments

Kind cashless document	Advantages	Disadvantages
Payment authorization	It has a universal character. Used in calculations for various payments. The simplest and fastest scheme of document flow.	For the payer: in the case of prepayment for commodity transactions there is no full guarantee that the products, services, works will be delivered on time and of proper quality. For the recipient of funds: delay in issuing payment orders to payers due to lack of funds on the current account.
Payment requirement-authorization	It has a universal character. Used in calculations for various payments. Increases the responsibility of the subjects of settlement relations for the organization of settlements.	The speed of payment is lower due to the fact that the debit authorization is issued by the payer. The possibility of delaying the payer's consent to payment due to lack of funds on the current account. Lack of guarantees from the recipient to receive the amount specified in the payment request.
Settlement check	For the supplier: relative speed of calculations; high degree of guarantee; high speed of receipt of funds on the account of the check holder and, accordingly, acceleration of capital turnover and reduction of receivables. For the buyer: a high degree of guarantee of receipt of the goods due to the fact that the check is issued and transferred at the time of receipt of the goods.	Restriction of payments by checks if the amounts of payments are significant; ease of forgery.
Payment requirement	Allows you to check the supplier's compliance with the terms of the contract in terms of product range and quality and to state a reasoned request for payment.	Labor-intensive, rejection of acceptance.
Collection authorization	Transfer of ownership of the goods to the buyer is carried out at the time of receipt of documents for him.	Risk of non-purchase of goods documents after the goods have already been sent to the importer; long term.
Letter of credit	For the buyer are the following: a guarantee that the funds will be credited to the current account only after delivery of the goods to the address specified in the contract; uncovered letter of credit allows not to allocate resources for prepayment; financing of foreign economic operation using a letter of credit cheaper than attracting a prepayment loan; the signature of the guarantor is not required for the execution of the contract; the servicing bank can offer a financing scheme using a letter of credit, which will significantly reduce its cost. For the supplier: in case of correct registration of the documents provided by conditions of the letter of credit, receipt of payment from bank is guaranteed; you can get financing secured by property rights under the letter of credit	For the buyer include: withdrawal of money from circulation for a certain period of time; that the covered letter of credit is more expensive than delivery on the terms of deferred payment; the fact that the letter of credit provides for the allocation of resources for their transfer to the coverage account; that in case of opening a letter of credit it is necessary to submit financial to the bank documents to assess the financial condition, to transfer the property as collateral (mortgage) and to bear the costs of their certification.

In addition to these types of payment documents, non-cash payments also include electronic means of payment.

According to paragraph 1 of Article 14 of the Law of Ukraine "On Payment Systems and Funds Transfer" it is established that an electronic payment instrument is a payment instrument that allows its holder to use the payment device to obtain information about funds due to the holder and initiate their transfer⁵²³.

Users have the right to use electronic means of payment to make payment transactions in accordance with the account regimes established by regulations of the NBU and the terms of the agreement with issuers.

Increasing the use of electronic payment systems is inevitable, as they have very important and undeniable advantages, namely:

- 1) availability – any user has the opportunity to open their own electronic account for free;
- 2) ease of use – to open and use an electronic account does not require any special knowledge, all the following steps are intuitive;
- 3) mobility – regardless of its location, the user can carry out any financial transactions with his account;
- 4) efficiency – the transfer of funds from account to account occurs within a few seconds;
- 5) security – the transfer of information is carried out using the SSL protocol with a code key 128-bit or other cryptographic algorithms.

One type of electronic means of payment is payment cards. A payment card is a special means of payment in the form of a plastic or other type of card made and issued to pay for goods and services, transfer funds from your accounts to other people's accounts, receive cash at banks, ATMs and other settlement transactions under the agreement between the bank and customer. To open a card account, the company submits to the servicing bank the same documents as for opening a current account (except for a card with sample signatures). If the company has a current account with this bank, it is enough to submit an application⁵²⁴. Payment cards are classified according to various criteria (Fig. 5).

Consider in more detail payment cards by type of ownership (by type of holder), which are personal and corporate cards:

- personal payment cards are issued by the bank in the name of the client – an individual and are used to make various payments;
- corporate can be issued only for business entities (legal entities or individuals – entrepreneurs). The use of this type of card for payments under foreign economic contracts, wage payments and social payments is prohibited. Also, to carry out transactions with a corporate card, you must enter into an agreement between the current account holder and the bank. The contract must specify all types of payment transactions available to a particular client, as well as the rules, conditions and maximum term of their execution⁵²⁵.

According to the scheme of use, bank payment cards are divided into:

- debit payment cards – the most common in financial and economic activities, as they are tied to current accounts of customers and allow you to purchase goods and services in the amount equal to the current deposit of the customer;
- credit payment cards – the feature is that their issuance is accompanied by the opening of credit lines, due to and within which payments are made or the issuance of cash. The terms of the loan and the procedure for making credit card payments are determined by the issuing banks and may differ significantly. Thus, according to some of the cards, the loan must be repaid within a month, and according to others - in a shorter time, without interest. For some cards, one-time

⁵²³ Pro platizhni systemy ta perekaz hroshei v Ukraini: Zakon Ukrainy vid 5 kvitnia 2001 roku № 2346-III

⁵²⁴ Kulish, A. Yu. (2016). Stan ta analiz bezghotivkovykh rozrakhunkiv v Ukraini ta osoblyvosti yikh obliku na vitchyznianykh pidpriemstvakh. International scientific journal. № 2. S. 116-119.

⁵²⁵ Kushnir, S. O. (2019). Perevahy vykorystannia bankivskykh platizhnykh kartok u sferi ahropromyslovoho kompleksu. Naukovi visnyk Uzhhorodskoho natsionalnoho universytetu. Serii : Mizhnarodni ekonomichni vidnosyny ta svitove hospodarstvo. Vyp. 25 (1). S. 134-137.

payments may be limited to certain amounts, for others – only the general limit of the credit line, for third cards may exceed this limit.

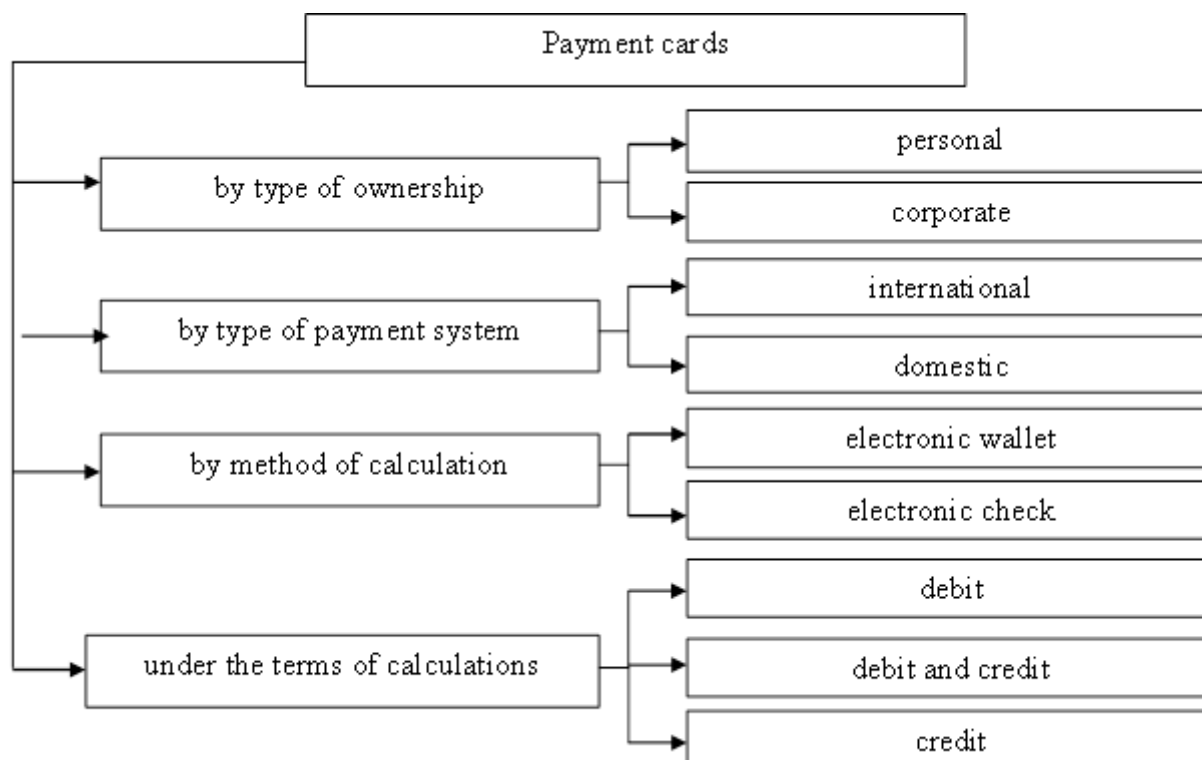


Fig. 5. Classification of payment cards

In the process of financial and economic activities of agricultural enterprises, payment gaps often occur. This is primarily due to a lack or absence of the required amount of cash in the current account at the time of payment. Solving this problem is possible through overdraft lending.

The main difference between an overdraft and a regular loan is that all funds received on the client's account are used to repay the debt. It is due to the overdraft that the current expenses of agricultural enterprises can be made, in particular:

- 1) payment of settlement documents for inventory;
- 2) performance of works and provision of services;
- 3) repayment of accounts payable, payment of wages to employees and payments equated to it;
- 4) deduction of funds to the budget for taxes and fees;
- 5) other current expenses.

According to the research, we consider it appropriate to highlight the advantages and disadvantages of using bank payment cards for agricultural enterprises (Table 2).

Taking into account the advantages and disadvantages of the use of bank payment cards in enterprises, it is advisable to propose the following promising areas for improvement and development of the payment card market, which will directly ensure the financial stability of the enterprise:

- 1) improving the protection of bank payment cards against fraud;
- 2) conducting trainings for staff to increase their financial literacy not only to inform about the possibilities of using payment cards, but also about the advantages of non-cash payments over cash;
- 3) ensuring the development of payment infrastructure and stimulating non-cash payments using payment cards;
- 4) stimulating non-cash payments by imposing restrictions on cash payments;
- 5) introduction of new functionalities for non-cash payments using payment cards.

Table 2. Advantages and disadvantages of bank payment cards

Advantages of bank payment cards	Disadvantages of bank payment cards
1) reducing dependence on the mode of operation of bank branches; 2) the possibility of prompt replenishment of the card and making payments from it; 3) improving the image of enterprises and increasing their sales; 4) the possibility of receiving advertising support from payment systems and banks that issue cards; 5) avoidance of risks associated with the storage and transportation of cash for various payments; 6) reducing the amount of documentation, facilitating the work of accounting related to cash accounting; 7) control of employees over the direct conduct of settlements; 8) speed of settlements during the procurement of agricultural products / raw materials from individuals; 9) the convenience of using corporate cards when traveling or buying stationery	1) the possibility of software problems; 2) high frequency of hacker attacks for illegal seizure of information

According to the NBU: “As of January 1, 2021, the largest number of payment cards was issued in the international payment system MasterCard (47.6 million units, or 64.8%). The second and third places in terms of the number of issued payment cards are occupied by the international payment system VISA (25.2 million units, or 34.3%) and the National payment system "SPACE" (0.6 million units, or 0.81%). The share of other card systems operating in Ukraine in 2020 was less than 0.01%. The leaders in card issuance are JSC CB PrivatBank (46.8% of all issued cards), JSC Oschadbank (18.4%) and JSC Universal Bank (6.0%)⁵²⁶.

The infrastructure for non-cash payments is significantly expanding. Thus, the number of points of sale that accept payment cards in 2021 increased by 20% – up to 356 thousand compared to the first half of 2020. The number of payment terminals (contact and contactless) per 1 million permanent population of Ukraine as of July 1, 2021 was about 10 thousand units (a year ago, on July 1, 2020 – 8.5 thousand units per 1 million population)⁵²⁷.

As you can see, payment card users used them to make card-to-card transfers, the time is 43%, transactions used to pay for goods, services and card transfers to accounts accounted for 29%, retail payment transactions accounted for 27% and a small 1% of non-cash transactions using payment cards were used in self-service devices.

The key indicator of the development of the non-cash economy is the share of non-cash transactions in the total volume of payment card transactions, which in 2018 amounted to 45.1%, in 2019 50.3% and 55.8 in 2020, which exceeds the project targets "Cashless economy" in 2020 by 0.8%.

Trends in the market of non-cash payments indicate an increase in transactions (non-cash and cash) using payment cards in quarantine 2020, which reached 5,997.1 million units, which is 18.6% more than in 2019, and their amount is UAH 3,957.3 billion, which is 10.6% more than in 2019.

In order to increase the efficiency and confidentiality of payment transactions to market participants by both financial institutions and merchants and buyers, it is advisable to use payment instruments that do not require identification of the payer in cases where this is not a prerequisite for the transaction. Such a mechanism can be easily implemented with the help of an electronic bearer payment instrument, which is issued without opening a bank account, electronic money.

According to Article 15 of the Law of Ukraine "On Payment Systems and Funds Transfer", electronic money means a unit of value stored on an electronic device, accepted as a means of payment by persons other than the person issuing them, and is a monetary obligation of this person, performed in cash or non-cash form⁵²⁸.

⁵²⁶ Richnyi zvit Natsionalnoho banku Ukrainy za 2020 rik.

⁵²⁷ Bezghotivkovi rozrakhunky.

⁵²⁸ Zakon Ukrainy «Pro platizhni systemy ta perekaz koshtiv v Ukraini» (2001), № 29.

Electronic money is a monetary obligation of the issuer in electronic form, which is on the device at the disposal of the user. Such a device can be a microprocessor card, a user's computer, an electronic money payment server, where users' electronic money is stored centrally, and so on. In electronic money settlement systems, bank accounts are used when money is entered and removed from the system. These are the bank accounts of the issuer of electronic money, not users. In the case of electronic issuance, the traditional money of users is credited to the issuer's bank account. When presenting electronic money for redemption, traditional money is debited from the issuer's bank account and provided to the bearer. For example, it could be a seller who sold goods or services for electronic money, or a consumer if he no longer needs such a means of payment.

Electronic money or electronic payment methods (new electronic payments methods) are various payment mechanisms created for the purpose of current settlements by consumers of goods and services. According to the director of the Ukrainian School of Finance and Banking M. I. Savluk, "e-money" is not an analogue of cash or a third independent form of money, but is a high-tech analogue of deposit money, which in the long run should replace the check. The development of electronic money is the improvement of the mechanism of storage, movement and functioning of deposit money. However, he stressed that in the scientific economic literature there are opposing views on this issue. The emergence of electronic money is due to:

- 1) the development of information and cryptographic technologies, which allowed to store money on technical devices and transfer it;

- 2) the needs of e-commerce systems that need a tool to make break-even micropayments.

Thus, it can be concluded that electronic money is a monetary obligation of the issuer in electronic form and is stored on the electronic device of the holder. Business entities have the right to use electronic money received exclusively in exchange for non-cash funds and only for settlements with traders for goods in electronic form purchased for production (economic) needs, expressed in hryvnias.

Electronic money is circulated through the operation of payment systems, where the payment system is a payment organization, members of the payment system and the set of relationships that arise between them when transferring funds, which is a mandatory function of the payment system. Transactions are usually bypassed by the banking system, ie via the Internet or mobile communications.

The circulation of electronic money is organized by special Internet payment systems, such as: Yandex, Money, RuPay, UkrMoney, PayPal, E-gold, WebMoney, LIQPAY, Limonex, FlashCheque, etc.

To work in any of these systems, an electronic wallet is opened, which is an electronic invoice in the payment system. Crediting funds to the e-wallet is similar to crediting funds to a bank account – by depositing cash at the box office of the system or by cashless transfer. With the help of an electronic wallet, both profitable and expenditure transactions are carried out. Electronic money is converted into cash through the payment office of the payment system or by bank transfer or postal transfer.

Given the above, we will try to outline a set of benefits of electronic money, which determine the convenience of their use and can cause greater use by business entities:

- 1) speed of calculations;
- 2) anonymity;
- 3) cost reduction;
- 4) increase in sales;
- 5) uncontrollability for state fiscal bodies.

Despite the rather broad regulations governing the functioning of electronic money in Ukraine, the inclusion of electronic money in the system of financial resources management has some difficulties.

One of the main advantages of electronic money is the simplification of settlement operations with foreign counterparties, which is why electronic money denominated in foreign currency

is widely used. The current chart of accounts does not provide for a separate account for such money, which creates problems in reflecting transactions with them in the accounting system.

At the present stage of development of the domestic economic system it is necessary to rethink approaches to the management of financial resources of the enterprise in order to update them. Such forms of payment as promissory notes are quite rare in the practice of Ukrainian enterprises. This is due to the obsolescence of this form of payment and its uncompetitiveness compared to electronic money. The economic system is being transformed as a result of the transformation of relations between economic entities, and recent trends indicate the rapid development of electronic means of commerce. This necessitates the adaptation of the accounting system to modern business conditions.

It is advisable to focus on the requirements for the issuance of electronic money and transactions with them (Fig. 6).

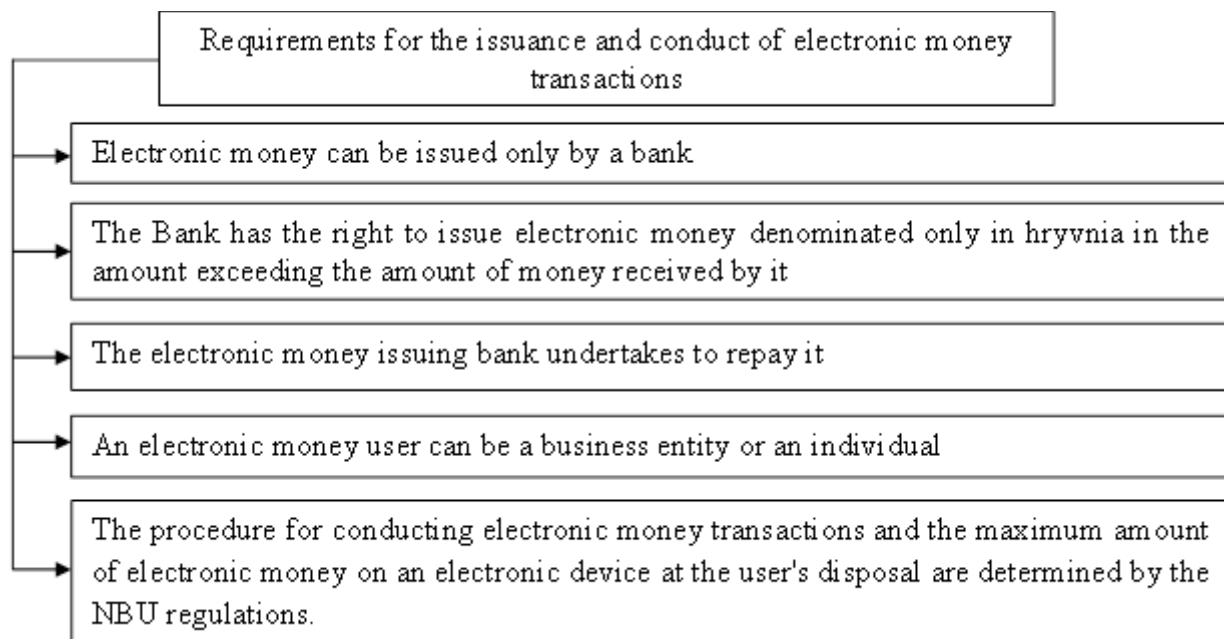


Fig. 6. Requirements for the issuance and conduct of electronic money transactions⁵²⁹

The use of electronic money has its advantages:

- 1) for consumers – it is convenience, cost reduction, as well as security of privacy;
- 2) for sellers – increase sales, reduce costs, favorable terms of contracts;
- 3) for financial intermediaries, as well as for other participants in electronic settlements – important issues are both security of payments and their confidentiality (provided by the economic nature of electronic money, which is not a means of accessing a bank account such as payment cards, Internet banking or mobile banking).

According to the results of the study, it can be concluded that non-cash payments are one of the main methods of payment between enterprises, organizations and institutions in our country and in other countries. Cashless payments using modern digital technologies can significantly speed up payment transactions, reduce the amount of cash and the share of risk in the settlements of customers with suppliers, ie they are convenient, fast and efficient. As progress progresses, banks are trying to move to the issuance of virtual or digital cards, as this not only saves the bank, but also allows customers to start using the card as quickly as possible. You can also use cards to perform a huge number of transactions, the most common of which is to pay for any purchases, both in regular stores and on the Internet.

⁵²⁹ Tyshchenko, V. V. (2018). Vzaiemozviazok mizh rivnem bezgotivkovykh rozrakhunkiv ta efektyvnistiu finansovoho zabezpechennia diialnosti pidpriemstva. Visnyk Odeskoho natsionalnoho universytetu. Serii: Ekonomika. T. 23, Vyp. 2. S. 113-117.

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ANNOTATION

Part 1. SOCIETY IN THE DIGITAL AGE: SOCIAL AND HUMANITARIAN ASPECTS

1.1. Valentyna Yuskovych-Zhukovska. TRENDS IN THE DIGITAL TECHNOLOGIES DEVELOPMENT FROM THE INTERNET OF PEOPLE TO THE INTERNET OF THINGS

The principles of using Internet resources in the development of the digital economy are revealed. The transformation of the global Internet in the context of digitalization in society is studied. The essence of the terms "Internet of People", "Internet of Things", "Smart Technology" is outlined. It is determined that the digitalization of economic activity in the information society is realized mostly with the use of services via the Internet. The directions of development of the Internet are analyzed, namely: with human participation and automated, ie without human participation. Citizens' activities in such a society are becoming more focused on the use of digital technologies.

1.2. Olha Haborets. CONCEPTUAL FUNDAMENTALS OF SELF-IMPROVEMENT DEVELOPMENT OF PERSONALITY

The article deals with the problem of the study of personality, the process of its self-development and self-improvement of the personality in its historical and philosophical aspect, describes the main historical stages, as well as analyzes the works of scientists of different epochs, devoted to the problem of formation of self-improvement and philosophical study of philosophical and philosophical studies. The problems of development and formation of a certain phenomenon in the philosophical heritage are considered.

1.3. Mariia Zaslavska. FACTORS OF ENDOGENOUS GROWTH OF THE VALUE OF COMPETENCIES OF HIGHER EDUCATION INSTITUTIONS

The aim of the study is to determine the factors of endogenous growth in the value of competencies of higher education institutions (HEIs). The roles of higher education are generalized in the work and modern roles are defined. These are ensuring the transfer of knowledge and technology from science to industry and business, creating knowledge based on research work in companies, research laboratories and universities, the availability of knowledge about the University for the Business Environment. New opportunities for HEIs have been created. They are building a critical mass based on strategic partnerships and a quadruple spiral model, focusing universities on societal challenges and innovation, building entrepreneurship, creating regional innovation ecosystems and creating new cultures and orchestrations.

1.4. Oleksandr Kibakov. ACCELERATED ASSESMENT OF FATIGUE STRENGTH CHARACTERISTICS

For establish the characteristics of the fatigue resistance of objects (parts or samples), both traditional and accelerated methods for determining these parameters are used. Traditional methods are expensive and time consuming, since their implementation requires a long time and a large number of test objects. Accelerated methods – allow you to reduce both the time and the number of tested parts. With regard to objects subjected to cyclic loading in operation, the traditional method becomes unsuitable if it is necessary to make operational design and technological decisions when modernizing equipment. It follows that the replacement of long traditional methods with accelerated ones that would not be inferior to them in terms of resolution becomes

an important task. In practice, the suitability and effectiveness of many accelerated methods have been proven. At the same time, the relevance of the further development of known and the search for new, more universal methods is felt. In this regard, of particular interest are methods based on testing one object under a regular loading regime. In this paper, a method has been developed for the accelerated construction of an individual high-cycle fatigue curve for testing one object. It includes fatigue testing of the part under study, macroanalysis of its fracture, calculation of fatigue curve parameters and endurance limit for each tested object. The possibility of constructing an inclined section of the fatigue curve along the initial ordinate is shown. Based on the study of the fracture of the part, taking into account the closure of the crack edges, the nominal maximum stress acting at the moment of failure was calculated. The possibility of estimating the initial ordinate of the fatigue curve from the calculated value of this stress has been studied. It is proposed to determine the endurance limit by the found parameters of the fatigue curve and abscissa of the break point of the fatigue curve. The acceptability of using this approach for the operational assessment of the fatigue resistance characteristics is shown of destroyed objects.

1.5. Iryna Ostopolets, Svitlana Sytnik, Snizhana Stepanova, Magdalena Wierzbik-Strońska. DIGITAL TECHNOLOGIES IN THE STUDY OF PSYCHOLOGY

The article reveals the role and importance of the introduction of digital technologies in the process of education in higher education. The possibilities and advantages of interactive exercises developed with the help of the web service LearningApps.org are considered. And Mindmapping. Features of use of the corresponding resources, sequence of stages of creation of educational exercises are described. Examples of developed interactive exercises in psychology by teachers and students as a creative independent task are given.

1.6. Yuliia Sidenko. PERINATAL SYMBOLISM AND ITS DETERMINATION BY OEDIPAL DEPENDENCE OF THE SUBJECT

The article aims to solve a significant theoretical and methodological issue of seeking ways of depth cognition of psychological meaning within perinatal symbolism, which is objectified through the means of representation by prospective psychologists during group psycho-correctional sessions of Active Socio-Psychological Cognition (ASPC). The research has been conducted in accordance with the psychodynamic paradigm that synthesises psychoanalytic, phenomenological, humanistic and other approaches to cognition of the psyche.

1.7. Volodymyr Siaskyi, Inna Siaska. TO THE PROBLEM OF COMPUTER SIMULATION MODELING OF PHYSIOLOGICAL PROCESSES AND SYSTEMS

The general scheme of construction of computer simulation models of physiological processes and systems of the human body is offered. Based on the concept of representation of the organism in the form of a set of hierarchically related structural elements and processes of reception, transmission and processing of information that takes place in them, the criteria for selecting the object of simulation are formulated. Structural and functional decomposition of models is carried out using a multilevel hierarchy of «black boxes» and information flows through which the interaction of structural elements. To transform the information flows at the lower level of decomposition, the model of the «atomic black box» (atom) is used, which is analogous to artificial neural networks. The final computer simulation was performed for kidney and lung models.

1.8. Natalia Shavrovska. AWARENESS AS A MECHANISM OF FORMATION OF LIFE PERSPECTIVES IN NEW CONDITIONS

The article reveals the phenomenon of mindfulness meditation as a tool of self-regulation, adaptation and one of the factors influencing the formation of life prospects in a constantly changing environment. The purpose of this type of cognitive-behavioral therapy is to solve people's

psychological difficulties by combining the concept of awareness with the ideas of cognitive-behavioral psychology. This practice teaches the client to be fully present in the situation "here and now", to notice the usual states of his consciousness, to control attention and behavior. It is a training of awareness and attention, especially to internal factors, as well as stabilization of mental state. In the works of some researchers, the technique of meditation appears as a practice of merging consciousness and the object of concentration. The object can be an idea, thought, mantra, and the subject of sensory perception—melody, crystal, image, candlelight. In this case, there is an attempt to stop the internal dialogue, which allows you to be "here and now", sharpen attention and awareness, balance the emotional state caused by negative thoughts, as well as relax from the growing flow of information from the outside world, while allowing to think more effectively due to better concentration.

Thanks to stable attention and achieving a higher level of awareness, it is possible to track and comprehend their automatic behavior, and further reduce automatisms. In this way a person receives more information about himself, a more complete feeling of himself is achieved – his body, his thoughts, his emotions. The therapeutic effect of mindfulness is to reduce vulnerability to stress, the ability to get out of personal destruction and deal with debilitating events and situations.

Emotional stresses by their origin are usually social, and resistance to them in different people is individual. Stress responses to psychosocial difficulties are not so much a consequence of the latter as an integrative response to their cognitive assessment.

1.9. Volodymyr Shportko. DEVELOPMENT OF THE INFORMATION SOCIETY AND INFORMATION WAR IN THE CONDITIONS OF UKRAINE'S STRUGGLE AGAINST RUSSIAN AGGRESSION

The state and problems of information society development in the conditions of information (hybrid) war of the Russian Federation against Ukraine are considered. The connection of the information war waged by Russia – the aggressor state with the further development of military aggression against Ukraine to achieve political goals is shown. Emphasis is placed on the importance of understanding the content of information warfare in the confrontation between the parties by applying concentrated information to the population of the country, as well as the population of the enemy and other countries. The hybrid Russian-Ukrainian war is an expression of the inter-civilizational conflict affecting the socio-cultural space and creates additional risks for Ukraine and European countries.

1.10. Svitlana Shcherbinina, Olena Shevchenko. INFORMATION SUPPORT FOR ENSURING THE ENERGY EFFICIENCY OF THE HOUSING SECTOR OF UKRAINE

The paper considers information support for energy efficiency of the housing sector of Ukraine and its component – software for energy management system. The mechanism of realization of the energy management system in the housing sector of Ukraine is presented. It is determined that the successful application of the mechanism of energy management system implementation largely depends on the functionality, convenience and technical capabilities of the software used in this field. The indicators of software quality are described, as well as the characteristics of software products for the energy monitoring and management system presented in the modern information technology market. The rating of software by quality assessment is given. It is noted that software products for the energy management system are more widely used in the public sector compared to the residential sector. The model of the digital platform "Energy efficient housing: state, region, city, territorial community" is proposed, the main goal of which is to combine all resources, tools, knowledge, specialists in real time by integrating digital technologies to ensure energy efficiency in Ukraine.

1.11. Liubov Chagovets. CONCEPTUAL BASIS OF THE UKRAINE DIGITALIZATION STATE ASSESSMENT AND ANALYSIS

The aim of the article is to develop a conceptual basis for assessing and analyzing the digital development of the country, which, unlike others, is based on methods of intellectual analysis of multidimensional objects, which improves the quality of formation and decision-making. The essence of digitalization is considered in the thesis and the analysis of a modern condition of digital transformation of the country is executed; the advantages and disadvantages of modern methods and models of digital development assessment is carried out; system analysis and mathematical modeling methods to assess the digitalization state of Ukraine are analyzed. The results can be used in the practice of the state's digital development management and regional management.

1.12. Inna Chernykh. MOTIVATIVE MODEL THE SOCIAL DEVELOPMENT DONNACEA FACULTY OF CIVIL ENGINEERING

The article presents the main results of qualification work on the management social development the target group Donbas National Academy of Civil Engineering and Architecture of the Faculty of Civil Engineering. For a comprehensive assessment of the state of the faculty and future threats to development, the influential indicators are analyzed and identified, which are summarized in the matrix of SWOT-analysis. The characteristics of the motivational climate of DonNACEA are given, which forms the main determinants of improving the quality work and is the main factor in the satisfaction of participants the target group the Faculty of Civil Engineering with their professional and social life. The results the calculation of the social passport are given and the analysis of the state of social development the target group Faculty of Civil Engineering is given.

1.13. Nina Ursani. THE AESTHETICS OF PATRIOTISM IN THE LYRICS OF VASYL STUS

The article analyzes the aesthetics of patriotism in the lyrics of Vasyl Stus based on his collection "Winter Trees". Rarytsky, V. Melnyk-Andrushchuk, R. Krylovets, devoted to the work of the poet.

The study examines works in which the toponym "Ukraine" appears, gives an artistic reception of Ukrainian history, sounds philosophical motives related to philosophical reflections on the role of the hero in the fate of his country, declaring a clear national civic position. In the article, the nation-building issues of Vasyl Stus relate to the study of the expressive civic sound of aesthetic dominants and the universal nature of the embodied existential problems associated with the ambivalent essence of the universe, with the eternal problems of life in the Winter Trees collection. Thus, the aestheticization of patriotism in the lyrics of Vasyl Stus is considered through the prism of creating the image of a hero-patriot of his nation.

1.14. Yuliia Bilotserkivska, Anastasiya Goloborodko. PSYCHOLOGICAL ASPECTS OF THE LOGISTICS OF THE MEDICAL SERVICE OF UKRAINE IN THE CONDITIONS OF MILITARY CONDITION

The article examines the impact of psychological aspects of logistics on the functioning of the medical service in the military condition in Ukraine - a theoretical aspect of the issue, both logistics and its relationship with the medical service. The specifics of the medical service work and the main aspects of its functioning are disclosed in view of the time and duration of the medical services provided. The specifics of emergency medical care work and the way in which the information passes due to the logistics of dispatching emergency medical care in conditions of peace and war in Ukraine are investigated. As a result of the study psychological aspects of logistics were established. The paper presents practical recommendations on the use of psychological aspects of logistics as a method of influencing the quality of medical services rendered by the medical service of the country.

Part 2. EDUCATIONAL ASPECTS OF INFORMATION SOCIETY DEVELOPMENT

2.1. Tetiana Koksharova. EXPERIMENT IN CHEMISTRY EDUCATION: CLASSICS AND MODERNITY

Experiment is a key component in the process of teaching chemistry. Demonstrations belong to the groups of verbal-visual teaching methods the features of which are the combination of the lecturer's word with the experiment. A big role belongs to the technique of demonstrations. Experiment in the context of distance education has its peculiarities. One type of independent work that is performed without the supervision of the lecturer is home experiment. Video experiments and photo presentations can be successfully applied in distance educations. Remote experiment is characterized by a large number of specific and useful features but it has certain disadvantages compared to the real experiment. Video experiments and photo presentations also have some advantages.

2.2. Svitlana Liulchak. THE DESIGN AND USE OF DIGITAL EDUCATIONAL ENVIRONMENT OF VOCATIONAL EDUCATION INSTITUTION

The purpose of successful introduction of the single information-education space of a educational institution is the creation of an automated system of this institution, which unites all the substructures and levels of its activity. The establishment and operation of an information-education space of an educational institution is responsible for the success of introduction of the information and communication technologies into the educational activity at all its levels. The tasks aimed at preparing students to living in the conditions of an information society, at forming the ability to successful socialization in the modern society are becoming of special importance. The article analyzes the ways of creating a single information-education space of a educational institution, determines the advantages and disadvantages of its functioning.

2.3. Kostiantyn Surkov, Kateryna Surkova, Maryna Lomakina. MODEL FOR CORRECTION OF AIR TRAFFIC CONTROLLERS' SIMULATOR TRAINING

The article considers the problems of correction of future air traffic controllers' simulator training, analyzes the research on control and correction of training, provides the concept of future air traffic controllers' correction. Scientific works on computer learning, learning process management, systems analysis have been considered. Substantiation and description of the model for correction of air traffic controllers' simulator training, developed on the basis of the methodology of system analysis, are given. The model reflects the complex process of educational activities management in the implementation of corrective measures in air traffic controllers' simulator training, which has components: input, process, output and feedback. The developed model is a complex dynamic model of the correction process control of air traffic controllers' simulator training.

2.4. Mykola Blyzniuk, Oleksii Debre, Nadiya Vakulenko. TECHNOLOGICAL EDUCATION IN THE MODERN INFORMATION SOCIETY

The article states that technological culture as a concept emerged in the late twentieth century to denote human interaction with technology, its life and activities in the technological environment. The phenomenon of technological culture is studied in philosophy, sociology, pedagogy and psychology. Technological culture combines objective and subjective components of culture, serves as a prototype of a universe (universal culture for modern society), the mastery of which is necessary for every person at the level of general and professional education. In order to be competitive and ready for the challenges in the field of technology education

in the information society, it is necessary to implement ideas that will be in demand in the near future, it is necessary to monitor trends and respond adequately. When introducing innovations to train a new generation of professionals, it should be remembered that in foreign and national sources (scientific and practical), in the practice of other educational systems, new ideas can be found and used effectively, which will take into account the experience of such innovations and to adapt them as much as possible during technological education.

2.5. Nelly Bondarenko, Serhii Kosianchuk. PROBLEMATIZATION AS ATTRACTOR OF PERFECTING LANGUAGE EDUCATION

The authors substantiate the relevance of problematization learning in today's globalized information society. The article considers the determinism of problematization learning; its essence is revealed and the structure is determined. The authors analyzed the psychological patterns of problem solving and didactic features of mastering the school course of the Ukrainian language (based on problematization learning). The role and place of the problem situation, problem questions and tasks, appropriate methods in the process of realization of problematization mastering of educational material are clarified; examples are given. In the article the authors characterize the methods, identify the strengths and weaknesses of problematization learning, and predict the further development of such learning.

2.6. Olena Harmash, Vita Hryhorieva. DIGITAL TOOLS OF TEACHING FOR FOREIGN LANGUAGES AT UNIVERSITY

The article deals with one of the important problem using digital instruments by teaching foreign languages for future teachers in modern Universities. It is emphasized that the field of education has an important and difficult task adapting methods, forms, of teaching and learning to the needs of modern digital society, which will allow quickly and efficiently to work and to learn in the information field, exchange views, content. It is considered the concept of "digital technology". It is noted effective teaching and learning process by using special principles. It is revealed some digital resources that are effective by foreign languages teaching (for ex. Zoom, Google Classroom, Ted Talks, Thinglink, Kahoot! and others).

2.7. Nataliia Kalashnik, Tamila Kravchenko, Iryna Shastko, Maria Kuzmina. FORMATION OF READINESS FOR FOREIGN LANGUAGE PROFESSIONAL-ORIENTED COMMUNICATIVE COMPETENCE OF FUTURE SPECIALISTS WITH HIGHER EDUCATION

The UNESCO Program Document «Reform and Development of Higher Education" states: "The quality of higher education is a concept that is characterized by many aspects and largely depends on the contextual framework of the system, institutional objectives or conditions and norms in this discipline».

The article outlines the actual problem of readiness of future specialist with higher education for foreign language professional-oriented communicative competence. It was determined that general professional training of future physicians is a component of professional training, and its fundamentalization is carried out in three main areas: information, activity and personal and combines all structural and functional components of the pedagogical system: goals, content, process, methods, techniques, forms, personal quality, result. The correlation of global, degree and local goals of professional and general professional training of future physicians and the requirements of today is based on the competence approach «initial (initial) → learning ability → ability readiness → practicality».

2.8. Larysa Maladyka, Vitalii Nuianzin. THE APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE TRAINING OF FUTURE PROFESSIONALS OF STATE EMERGENCY SERVICE (SES) OF UKRAINE

The present day burning problems of the higher educational system reforming are lightened out in this article.

The necessity and actuality of the modern informational technologies usage in the curriculum of the higher educational establishments of the State Emergency Service (SES) of Ukraine.

2.9. Larysa Prysiazhniuk, Olha Hroshovenko. THE USE OF DIGITAL TOOLS IN THE TRAINING OF FUTURE EDUCATORS OF PRESCHOOL EDUCATION

The study highlights the problem of the system of training future educators of preschool education by digitalization. The authors reveal the role of digital tools in the implementation of educational content aimed at acquiring key and professional competencies by students. The possibilities of various online resources for the effective organization of educational interaction during classes are analyzed. It is concluded that the choice of digital tools should be made taking into account the educational strategy chosen by the teacher and the content of education. An indicative map of the use of modern digital tools in the structure of educational activities in higher education has been developed and presented.

The results of the research allow us to assert the relevance of building a model of attracting investment and innovation based on public-private partnership, which will combine public and market vectors. It is based on the concept of state-partner attractiveness and state-partner potential of territorial formation.

Lviv region has a significant potential to increase investment attractiveness due to its advantageous geographical location, significant human, industrial and scientific-educational resources. Among the priority tasks facing the region today is to attract additional investments, which will contribute to the creation of new jobs and economic growth.

2.10. Iryna Samokhvalova. FEATURES OF THE TRAINING PROCESS OF VOLLEYBALL PLAYERS AGED 10-12 AT THE STAGE OF INITIAL TRAINING

The article is devoted to the problem of increasing the level of physical and technical training of volleyball players at the stage of initial training. The study involved 36 athletes of the initial training group aged 10-12 years in Sumy. As a result of the pedagogical experiment, significant improvements in the performance of test exercises of special physical and technical training in athletes of the experimental group were established. We have proposed a method of optimizing the training process of volleyball players at the preparatory stage of training, which is built with increasing hours for general and special physical training and the use of information technologies training.

2.11. Nadiia Senovska, Iryna Nestaiko. WEBINAR AS A FORM OF QUALIFICATION OF TEACHERS: ON THE MATERIAL OF PRACTICAL EXPERIENCE

The article analyzes webinars as part of the modern educational process in Ukraine. The practical author's experience of holding the webinar "Secrets of professional self-regulation of a teacher", which was organized within the framework of teacher training, is described. Researchers have studied the experience of theoretical substantiation and development of webinars as a form and technology of teaching described in scientific works of Ukraine. The analysis of the author's webinar was carried out according to the following attributes: topic, purpose, tasks, tools, software, advertising, structure and duration of the lesson, content, features of interaction and communication with students, efficiency.

2.12. Yana Suchikova, Sergii Kovachov, Ihor Bohdanov, Tetyana Nestorenko. IMPROVING THE READINESS OF FUTURE NANOENGINEERS TO CARRY OUT PRODUCTIVE ACTIVITY: TECHNOLOGIES AND TOOLS FOR ASYNCHRONOUS LEARNING

The events of recent years, namely the two-year COVID epidemic and the beginning of Russia's invasion of Ukraine and the outbreak of a full-scale war, have caused serious problems in higher education, i.e., the inability to conduct offline classes. This problem is especially acute for technical and natural majors, as the training of relevant specialists requires practical work in laboratories. Today, due to hostilities and temporary occupation of some regions of Ukraine, a large number of students and teachers do not have the opportunity to attend/conduct training in the usual remote mode with online communication. Therefore, asynchronous learning has been introduced in some regions. At the same time, Ukrainian universities have not had the relevant experience yet. So, there is an urgent need to develop appropriate tools and mechanisms. In the offered research, we have analyzed the possibility of using open databases of nanotechnology products and crystallographic structure of substances by future specialists in the field of nanomaterials. The use of these databases enables mastering the required materials and acquiring key nanotechnological competencies. For practical activities, it is proposed to use a program for visualization of substances' structure, which will help future nanoengineers to acquire skills for productive innovation.

2.13. Alexander Sklyarenko. EDUCATION AS AN INNOVATIVE FACTOR OF THE DEVELOPMENT OF MODERN SOCIETY

The paper analyzes the state and development of national education during the period of Ukraine's independence, identifies current problems in the field of education, identifies the reasons for their emergence, offers scientifically sound ways to modernize national education in the context of globalization, European integration and national self-identification – information society.

2.14. Alina Stopkina, Andrii Stopkin. FORMATION OF INFORMATION COMPETENCE OF FUTURE SPECIALISTS IN THE SOCIAL SPHERE BY CLOUDY TECHNOLOGY

The article is devoted to the use of cloud services in the formation of information competence. The study substantiates the importance of cloud services and analyzes the use of cloud technologies in the information and educational environment of higher education. The authors clarified the didactic possibilities of cloud services and identified the pedagogical conditions for learning to use them. Methodological aspects of designing the learning process based on the use of cloud services, aimed at improving the level of information competence.

2.15. Tatiana Turka, Zoya Pashchenko, Andrey Zaika. APPLICATION OF DIGITAL PLATFORM KAHOOT! IN THE WORK OF A TEACHER OF MATHEMATICS

Today, the digital competence of a mathematics teacher is a very important skill in considering the scale of digitalization processes in the world, the formation of a digital society. Enriching the teacher's knowledge in the direction of SMART-technologies fully meets the requirements of modern school. The article is devoted to the use of software tools in school, which significantly expand the capabilities of teachers and students, forming important for our time technological competencies. The advantages and disadvantages of Kahoot! are considered in the work of a mathematics teacher. The functions of this platform are given, the algorithm for creating an interactive test Kahoot!

Part 3. CURRENT PROBLEMS OF DIGITAL ECONOMY DEVELOPMENT

3.1. Oleksandr Hladkyi, Valentyna Zhuchenko, Agbaje Temitope Adetomilola. DIGITAL FEATURES OF SUSTAINABLE DEVELOPMENT IN TOURISM

The article considers the features of sustainable tourism development in modern conditions. The main economic and social determinants of the development of the tourism industry in conditions of uncertainty are identified. Attention is paid to the study of the main preconditions and consequences of global economic transformations in the field of international tourism. The source base and periodization of stages of development of the concept of sustainable development of tourism within the modern paradigm of sustainable development are determined. Examples of successful implementation of the concept of sustainable tourism development in modern conditions on the example of the tourism industry of the European Union. The study is supplemented by an overview of the main problems of management in the implementation of the concept of sustainable development of the tourism industry.

3.2. Anna Kozachenko. NON-CASH PAYMENT SYSTEMS IN THE CONDITIONS OF DIGITALIZATION

The article analyzes the processes of digitalization of non-cash payments. The essence of the concept, the need for non-cash payments, the basic principles of their organization are determined. Emphasis is placed on the significant variety of non-cash payments by their types and features of implementation. The peculiarities of settlements with the use of a payment order and a settlement check are highlighted. The advantages and disadvantages of using non-cash payments and payment cards, in particular. Based on this, promising areas for improvement and development of the payment card market are proposed, which will directly ensure the financial stability of the enterprise. Requirements for issuing and conducting transactions with electronic money are considered. The indicators of the market of non-cash payments with the use of payment cards, electronic money and the impact of digitalization on their structure are analyzed.

3.3. Volodymyr Kulivnuk, Oleksandr Hladkyi, Tetiana Tkachenko, Anastasiia Mishcuk. USING OF SWOT-ANALYSIS IN RECREATION, PHYSICAL AND REHABILITATION MEDICINE

SWOT analysis has been used for strategic planning since the 1960s by identifying the following factors: strengths, weaknesses, opportunities and threats. In the field of Recreation, Physical and Rehabilitation medical services, the strengths include those items: professionalism of medical staff; modern medical (rehabilitation) equipment; convenient location, comfort and safety in providing of medical (rehabilitation) services; positive patient feedback; understanding of health consumer needs; established market positions; expanding the range of services. There are weaknesses of Recreation, Physical and Rehabilitation medical services: unstable financial policy and monopoly position of the Ministry of Health. We can highlight these opportunities: sale of services that return a profit out of health insurance system; health customer loyalty. Finally, there are some threats of Recreation, Physical and Rehabilitation medical services: competition in rehabilitation field; high interest rate on credit; increased sensitivity to the economic situation in service sector; reduction of health customer incomes.

3.4. Olena Martseniuk. TRENDS IN DIGITALIZATION IN THE INSURANCE MARKET OF UKRAINE

Theoretical and practical principles of using digital technologies to revive the development of insurance business and optimize insurance risk management in today's challenges are summarized. It is noted that the digital transformation changes the depth of the basis of interaction between insurers and policyholders. Positive trends in the digitalization of business processes in insurance have been identified and its relevance during the COVID-19 pandemic has been determined. Maintaining the stability of insurance companies, especially in times of crisis and economic instability, requires the development of new sales channels for insurance products.

The article is devoted to the study of the use of digital and Internet technologies in the insurance industry, which provide new opportunities in insurance for both policyholders and insurers.

Given the economic importance of digital technologies in the insurance business in today's challenges, it is justified that the continuation of the digital transformation of the insurance industry is the main direction of development of the insurance market of Ukraine in the near future.

3.5. Leonid Melnyk, Yuriy Derev'yanko, Oleksandr Kubatko, Bohdan Kovalov, Iryna Dehtyarova, Oleksandr Matsenko. DYNAMICS OF ECONOMIC PROCESSES IN TRANSITION TO THE DIGITAL ECONOMY

The paper analyzes the dynamics of economic processes in the transition to the digital economy. It defines the key parameters of economic dynamics during modern industrial revolutions. The research describes factors changing the dynamics of economic systems in transition to a digital economy. It proves that the time factor is a highly malicious category closely related to economic factors. The paper explains how the economic system undergoes quantitative and/or qualitative changes in the transition to the digital economy. It shows how economic systems respond to changes in economic conditions (including changes, if necessary, production volume, product profile, switch to new products, diversifying the order portfolio, etc.) in transition to the digital economy.

3.6. Mariia Nazarkevych, Hanna Nazarkevych, Volodymyr Hrytsyk, Ivan Tsmots. DEVELOPMENT OF MULTIMEDIA PRINTING DOCUMENTS PROTECTED ON THE BASIS OF THE MOIR EFFECT

A new method of protection based on hidden elements is considered, for the construction of which the moire effect is used. This method will be able to provide a high level of protection of information in printed or electronic form, leaving no opportunity for falsification even on the best modern copying devices. The possibility of using the proposed method to protect information is analyzed. Latent elements contain micrographic images; vector curves that are difficult to reproduce, atypical rasters. We build latent elements by means of fine raster, vector and fractal graphics, based on the software developed by the authors. These latent elements are printed by offset printing, which we consider to be the original document. Copies were made from each original on a typical photocopier, which will be considered copies or forgery. With the help of densitometric measurements, it is highly probable that the impression belongs to the original or the forgery.

3.7. Olena Polova. DEVELOPMENT OF THE DIGITAL INDUSTRY IN THE FIELD OF HOTEL AND RESTAURANT AND TOURISM BUSINESS

The article discusses the basics of the digital economy, its characteristic features and scope. An analysis was made of the state of development of the digital economy in the world, reflecting the growth of its share in the gross domestic product, for which a characteristic feature is the state initiative to promote and develop digital processes, rather than business structures. An analysis of the level of digital technologies involved in the development of the tourism industry indicates

the paramount importance of information as a key factor in the digital economy. The paper characterizes the information space of the tourism sector, describes digital services and platforms that have become widespread and replaced the offices of travel companies. The proposed model of a digital platform for tourism and hospitality "Tourism 4.0", with a description of its characteristic principles, can be achieved because of a combination of key technological capabilities, namely artificial intelligence, the Internet of things, robotics, voice technologies, and blockchain.

The hospitality industry, for which digitalization processes have become especially relevant, has been able to expand its target audience, improve service quality, and thus develop rapidly, using more and more high-quality digital platforms – there are dozens of technology startups in the world travel and travel companies by bringing original ideas to the industry. Of course, digitalization in the field of tourism is a process uneven for different countries, so the analysis of key modifications and trends will give an idea of the challenges facing tourism not only in a particular country but also in a particular region.

3.8. Oksana Ruda. MANAGEMENT OF BANKS IN TERMS OF DIGITALIZATION OF BANKING

The article reveals the essence of digital technologies for the development of banking services. The development of the digital economy is an important stage in the development of the digital market in Ukraine and its further integration into the single global digital market. The main characteristics of the digital economy, factors, state, as well as the main problematic issues of the current stage of development of banks are analyzed. An analysis of the impact of digitalization on the activities of modern banks and the specifics of the development of digitalization in Ukraine. It is proved that under the influence of digital technologies in the banking sector the processes of disintermediation are developing.

3.9. Anatolii Anchev. THE IMPACT OF DIGITAL MARKETING AND FINANCIAL TECHNOLOGIES ON THE DEVELOPMENT OF THE INFOCOMMUNICATION SPHERE AS A COMPONENT OF INNOVATIVE INFRASTRUCTURE

The article substantiates the need to develop the field of infocommunications as one of the priorities in the development of innovation infrastructure, the effective operation of which guarantees the interaction of subjects and objects of innovation, as well as access to various information resources, which, in turn, increase efficiency use of the country's innovation potential.

3.10. Olga Bralorazumova, Oleksandr Nestorenko, Vira Dubrovina. METHODS AND MODELS FOR ESTIMATING EXPORT POTENTIAL BY EXAMPLE INDIVIDUAL PHARMACEUTICAL ENTERPRISES OF UKRAINE

The article provides a theoretical justification for the formation of the export potential of the pharmaceutical company and the definition of possible methods and models for its evaluation for individual pharmaceutical companies in Ukraine. It is determined that export activity is a component of production and financial activities of the enterprise and is characterized by complete independence in choosing a foreign counterparty, product range, in determining the contract value, volume, price and delivery time. Therefore, the study of factors influencing the efficiency of export operations is of key importance. It is noted that the key factors of success of a pharmaceutical company in the market include external financing and efficiency of operations of market participants, as well as market growth prospects and the impact of the external environment.

3.11. Liudmyla Hnatyshyn, Oksana Prokopyshyn, Nataliia Trushkina. TRANSFORMATION OF MARKETING ACTIVITY OF AGRICULTURAL ENTERPRISES IN THE DIGITAL ECONOMY: THEORETICAL ASPECTS

The article analyzes and summarizes the existing conceptual approaches to defining the essence of the concepts of “sales activity”, “marketing activity”, “agrarian marketing”, “transformation”. It has been established that the digital age will contribute to the transformation of the marketing management paradigm of agricultural enterprises, tools for the formation of marketing strategies, marketing policy, digital channels, customer experience, management approaches to supply chains and the creation of an appropriate logistics infrastructure and agricultural clusters. The author's interpretation of the economic category “transformation of the marketing activities of an agro-industrial enterprise in the digital economy” is presented, which refers to the process of changing the essence, the types, forms, properties and structure of marketing systems and networks, the principles of corporate culture, consumer values, the system of views, management functions, the nature of partnerships between business entity, customers and different categories of stakeholders.

3.12. Vasyl Gorbachuk, Maksym Lupey, Seit-Bekir Suleimanov. GLOBAL DECENTRALIZED MECHANISMS OF DATA MANAGEMENT

Infrastructure is a prerequisite for the collection, exchange, storage, processing and distribution of up-to-date data through their digital nature. The use of all the socio-economic value of modern data services involves a publicly available digital infrastructure, as well as adequate speed of the Internet at an affordable cost. Such an infrastructure begins with adequate international bandwidth to ensure smooth and permanent access to global Internet communities. The developing world does not have such an infrastructure, but it has a large stratification of the population in terms of broadband Internet connection. Thus, the data infrastructure is becoming a source of injustice, including the digital divide between rich and poor countries. Mitigating such adverse events requires well-designed infrastructure strategies.

3.13. Lidiya Guryanova, Roman Yatsenko. MODELLING THE SOCIO-ECONOMIC EFFICIENCY OF THE HEALTH CARE SYSTEM

The goal of the study is to develop a set of models for assessing the socio-economic efficiency of the resource provision of health systems, which, based on the methods of multidimensional data analysis, make it possible to form recommendations for choosing the most effective model of financial development. The problem of assessing the socio-economic efficiency of the health care system was analyzed; review of existing approaches, methods for assessing the socio-economic efficiency of the health care system was carried out; scheme of the relationship between models for assessing the socio-economic efficiency of the health care system was developed; modelling methods and software tools for implementing models were substantiated; model for a comprehensive assessment of the level of resource provision and socio-economic efficiency of the health care system was developed; model for classifying countries according to the level of socio-economic efficiency of the resource provision of health care systems was developed; model for identifying a class of countries was developed; recommendations to improve the level of socio-economic efficiency of the resource provision of health care systems were formulated.

3.14. Nadiya Dubrovina, Ruslan Chemchykalenko, Dmytro Nestorenko. IMPROVING THE EFFECTIVENESS OF THE SALES STRATEGY OF THE PHARMACEUTICAL COMPANY IN INTERNATIONAL MARKETS

The article considers the issues of theoretical adjustment of the peculiarities of the organization of sales activities in pharmaceutical enterprise and provides recommendations for improving its efficiency in the international market on the example of an individual enterprise.

An analysis of the sales activities of “Zdorovya Pharmaceutical Company LLC” is carried out. This company is one of the leading companies in the pharmaceutical industry of Ukraine, and for many years has held significant positions in its segment and supplies its products to various countries, including CIS and individual countries in the EU. Examples of using simple models for cost analysis and budgeting, constant monitoring of trends and potential for sales abroad, which will allow the company to improve its sales activities and increase profits from the export of pharmaceutical products.

3.15. Liudmyla Zveruk. MODERN DIRECTIONS OF DEVELOPMENT OF FINANCIAL MANAGEMENT OF ENTERPRISES

The digital economy involves the introduction of information technology and innovation not only in production but also in management processes, in particular in the financial management system. The peculiarity of financial management is that it is: a comprehensive system that includes the concept of management, mechanism and organization of management; complex, dynamic and open system with elements of financial logistics; includes the development of financial strategy, tactics and financial policy. The Financial Planning and Analysis Platform (FP&A) includes budgeting, forecasting and analytics processes; combines in-depth analysis of operational and financial data; consists of such types of management activities as: planning, budgeting, integrated financial planning, management report, forecasting and modeling. The impact of digitalization forms a new conceptual model of financial management based on the use of cloud computing, network technology, remote control, cybersecurity, integrated management system.

3.16. Tetiana Katkova. DIRECTIONS OF IMPROVEMENT OF THE SYSTEM OF DIGITAL MARKETING COMMUNICATIONS OF THE SUBJECT OF FOREIGN ECONOMIC ACTIVITY

The aim of the article is to analyze the state and trends of foreign economic activity of the enterprise analyzed in this study, as well as to substantiate recommendations for improving the system of its digital marketing communications in order to improve foreign operations and financial and economic activities in general.

The study reveals the urgency of the problem of improving the system of digital marketing communications of entities specializing in foreign economic activity. It is shown that digitization of the marketing communications system of enterprises is not only a modern trend, but also a way to further large-scale digital transformation of business processes and business in general.

It is proved that the introduction of digital marketing communications of enterprises developing foreign economic activity is due to the need to learn the features of modern network technologies in the implementation of marketing approaches to promote products (services) in foreign markets, search for useful information, potential customers and business partners, market expansion sales, ensuring the effectiveness of advertising campaigns to organize an effective feedback system with buyers and consumers.

The scientific novelty of the research results is to substantiate the directions and tools of development of digital marketing system of the enterprise, to determine the tools to improve Internet marketing communication policy, to develop tools to improve marketing communication policy in digital communication system.

The characteristic of the general foreign economic activity of the researched enterprise is given. It is shown that the development of the system of digital marketing communications of enterprises requires changes in the flows of information marketing channels in the following areas: sales promotion; consumer relations; financing; risk management; material and technical supply; calculations; property rights. The range of modern topical communication and information elements of the marketing communications system of the enterprise, namely media and advertising communications, hardware and software, mobile and e-marketing technologies is determined.

The applied significance of the research results is to determine the directions of further development and effective use of digital marketing tools of foreign economic activity, namely

the vectors of relations: (1) consumers, (2) subjects of economic activity and economic sector, (3) representatives of the government and public sectors, (4) subjects of industry infrastructure, innovation and technology activities and information and communication technologies.

3.17. Yurii Kravchyk. DIGITAL COMPETITIVENESS MANAGEMENT OF THE NATIONAL ECONOMY OF UKRAINE

The purpose of the article is to analyze the state, trends, factors of influence and components of security, as well as to identify tools and means of ensuring the digital competitiveness of the national economy of Ukraine.

The study reveals the relevance of the problem of forming and ensuring the digital competitiveness of the national economy. The essential characteristics of the concept of "digital competitiveness of the economy" are generalized. The author's vision of the structure and system of digital competitiveness of the national economy as a system of characteristics within the components is revealed: resource provision of the digital economy; the level of development and realization of the potential of the basic sector – ICT; development of digital infrastructure and digital communication system; sufficiency of technical and technological support for the functioning and development of the digital economy and society; availability of a system of horizontal and vertical integration connections and relations; the ability of the digitization system to develop. The analysis of the state, dynamics and structural and functional aspects of digital competitiveness of the national economy of Ukraine is carried out.

The leading methods of rating assessment of the competitiveness of the economy and its digital components are generalized. The characteristics of Ukraine's places in the world ranking of digital competitiveness in 2014, 2017-2021, as well as the places of Ukraine and other countries in the rankings of digital competitiveness and investment attractiveness in 2019, 2021.

A set of state policy measures aimed at strengthening the digital competitiveness of the national economy of Ukraine has been developed, namely: de-shadowing of business processes and increasing the transparency of digital activities; intensification of cooperation of IT entities with enterprises of other types of economic activity; improving the investment infrastructure of the digital economy sector; improvement, diversification and increase of efficiency of foreign economic cooperation of domestic subjects of ICT sphere with external partners; digital transformation of the domestic economy and participation in this process of representatives of the ICT sphere, development of the infrastructure of the digital economy; participation of ICT actors in improving business processes of enterprises.

3.18. Yuriy Lotyuk. MAN-MACHINE INTERACTION IN THE INDUSTRIAL INTERNET OF THINGS

Selection of dialogue control elements is executed to build a model of human-machine interaction in the industrial Internet of Things; the user's interface is evaluated on the basis of users' questioning and observation; an experiment to assess ergonomic hypotheses is conducted; dialog controls are worked up.

3.19. Halyna Madi. WAYS TO OVERCOME ECONOMIC MARGINALITY IN THE CONTEXT OF THE REALITIES OF MODERN UKRAINIAN SOCIETY

When considering ways to overcome economic marginality, it is important to focus on such aspects as the social policy of the state and personal readiness to overcome the current situation. In modern Ukrainian society, the main determinants of the marginalization process are economic decline, unemployment, migration, rising crime, the collapse of the social sphere, and the crisis of the value system. One of the most significant factors influencing the dynamics of economic marginality is the lack of a single scale of values in transition, which increases the destructivism of marginality.

3.20. Yuri Pozdnyakov, Igor Bratishko. REGULATORY BASIS FOR ECONOMIC MEASUREMENTS OF DAMAGES COMPENSATION VALUE PERFORMANCE IN UKRAINIAN AND INTERNATIONAL EVALUATION STANDARDS

The article behaves to the field of damages and its compensation independent expert appraising/valuation. A comparative analysis of the legal framework regulatory basis for damages independent valuation implementation in national (NVS), international (IVS) and some foreign standards is considered. It is shown that the requirements for such economic measurements performing in Ukraine in national NVSs are set out in a very limited amount, and this may cause some difficulties in methodological approaches and evaluation procedures selecting and justifying. Based on the comparative analysis of NVS, IVS and some foreign standards rules, it was concluded that the requirements for evaluation works in the research area are set out with a very different degrees of completeness and details circumstantial. However, some IVSs and foreign standards contain a more complete statement of the damages and its compensation value economic measurement features. This convincingly confirms the expediency of these recommendations applying in evaluation practice, as it is required by the principle statements of the national legal framework for evaluation.

Theoretical bases, on those damage economic measurements expert valuation methodology is based, are examined. Main conditions that must be met when these economic measurements performing are formulated. The main principles of the economic measurements implementation using the metrological methodical approach are considered. Base terms, limitations, original assumptions of that evaluation works performing conditions are set. Possible directions of evaluation methodologies improvement are analyzed. Some recommendations in relation to priority directions of further researches are offered.

3.21. Yurii Seliutin, Dmytro Obolonkov. THE DETERMINATION OF THE RESIDUAL LIFE OF BUILDING STEEL STRUCTURES BY THE RELIABILITY INDEX INDICATORS

In order to assess the operational safety of steel constructions, the paper analyzes the principles of calculating the safety of structural steel constructions with consideration for the reliability index β at all phases of constructions operation and the design fundamentals of the reliability index β for both new constructions (at the design stage) and structural steel constructions in the conditions of the long-term operation.

The task of safety and reliability calculations, first of all, consists in assigning normalized safety parameter values, i.e. normalizing the reliability index, the value of which should be strictly related to the consequence classes (CC), which are determining for setting the reliability coefficients for further calculations while designing the constructions.

The article considers the calculation values β of the reliability index for constructions operated beyond the time limit for operation, with accumulated defects and damages. To improve the mechanism for calculating the reliability index value for the constructions operated beyond the maximum operating limit, with accumulated defects and damages, several tasks were set to determine such values β of the reliability index below which the construction is no longer considered to be operational and to define the reliability index values β for possible performance of renovation works (reconstruction, refurbishment) to strengthen and extend the remaining structural lifetime.

Thus, emphasizing all of the aforementioned, the main conclusions to the article should be specified: at the stage of solving the issue of calculating the reliability index for structures being operated over the projected service life, with damages and initial defects accumulated during the operation period, it is required to perform their review and determine two main criteria for solving the issue of determining the reliability index, namely: to set such values of the reliability index below which the structure will be no longer operational, to define and set such values of the reliability index at which it is possible to carry out renovation works on steel structures, their reconstruction or repair.

Considering the possibility of changing the reliability index compared to a new structure, given that the residual service life may be shorter than the design one, taking into account the economic factors and factors of probability of losing a person's life, setting of such reliability index values is necessary for further possibility of the service life extension of a structure and determination of its residual life.

3.22. Olena Toporkova. INFORMATION AND ANALYTICAL SUPPORT OF FINANCIAL MANAGEMENT

Management of financial and economic processes of an economic entity is a complex integrated mechanism formed within the framework of accounting and analytical work. Decision making, as well as information exchange, is an integral part of any management function. The sequence of formation of information necessary for making management decisions arises at all stages of the accounting and analytical management process. It is also associated with all areas and aspects of management activities at the enterprise. Issues of information support of enterprise management have been investigated from the standpoint of a systematic approach in the context of management functions. A model of the system of information and analytical support of management has been built, which will increase the efficiency of management decision-making by the security service and will allow assessing the economic efficiency of using management analysis as a tool for information and analytical support for making management decisions.

3.23. Volodymyr Chenash. ANALYSIS OF THE IMPACT OF DIGITALIZATION PROCESSES FOR THE FORMATION OF INNOVATIVE DEVELOPMENT PLATFORM SOCIO-ECONOMIC SYSTEMS

The essence of digitalization processes is analyzed and the necessity of their implementation at the regional level is substantiated. It is proposed to supplement the existing approaches to the definition of "digitalization" in the domestic scientific opinion with the innovation-stimulating direction and determine that its essence is to stimulate innovation processes in socio-economic systems by taking advantage of digital tools and implementing new IT solutions to collect and processing of information flows between participants of intraregional interactions. A study of the advantages and disadvantages of digitalization of society, as well as the features of innovative entrepreneurship in a digital economy. The components of the strategy for the implementation of digital technologies in socio-economic systems have been formed.

3.24. Nataliia Suduk. PRIORITIES AND MEANS OF EFFECTIVENESS OF REGIONAL ECONOMIC COMPLEXES OF UKRAINE ON THE PRINCIPLES OF DIGITALIZATION TAKING INTO ACCOUNT WORLDWIDE

The study focuses on the relevance of public administration issues of effective functioning of regional economic complexes on the basis of the introduction of smart technologies and digital transformation (digitalization).

The purpose of the study is to substantiate the priorities and means of improving the regional economic complexes of Ukraine on the basis of digitization, taking into account the most progressive world experience.

Insufficiently high efficiency of regional policy in Ukraine was stated and it was concluded that in order to properly increase the effectiveness of regional policy, intensify economic development and improve the quality of life, it is necessary to ensure active and comprehensive implementation of digital transformation of economy and society.

Strategic guidelines for programming the effectiveness of regional economic complexes of Ukraine on the basis of digitalization have been determined. This is the transition to technology and smart-oriented approaches to the organization of production systems, formation and development of socio-economic infrastructure; introduction of modern technologies of spatial development, settlement management; realization of ICT potential in the development

of digitalization of the system of social infrastructure facilities; strengthening the effect of the factor of cultural traditions, security of consumption; replacement of raw materials sectors of the economy by the development of digital-oriented economic activities.

The applied significance of the research results is that specific regional policy measures have been identified, which are focused on smart digital development of territories and provide for the formation of digital infrastructure; development of digital economy branches; digital security; digitization of health and education systems; social responsibility of entrepreneurship and society in the digital environment; digitalization of the labor market and new forms of employment; use of ICT smart technologies to keep the space clean and safe.

The scientific novelty of the research results is the further development of the tools of state policy of digital transformation of regional socio-economic systems.

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00000000	88.0007
00000000	00.0
00000000	28.285.45
00000000	88.520.8
00000000	15.001.77
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