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НЕФІНАНСОВІ ВАЖЕЛІ ЗАБЕЗПЕЧЕННЯ ЕФЕКТИВНОГО ВИКОРИСТАННЯ
УРЕЧЕВЛЕНОЇ ПРАЦІ В КОНТЕКСТІ ЦИФРОВОЇ АДАПТАЦІЇ УПРАВЛІННЯ БІЗНЕС-
ПРОЦЕСАМИ

Актуальність. Сучасний етап розвитку світової економіки характеризується масштабним
впровадженням цифрових технологій у різних сферах та видах економічної діяльності. Цифрові інновації
рішення, будучи основоположною рушійною силою базових трансформацій в економіці, не тільки створюють
умови для появи нових товарів та послуг, але також призводять до впровадження новаторських бізнес-
моделей, можуть сприяти суттєвому збільшенню ефективності як у публічному, так і у приватному секторі.
Впроваджуючи цифрові технології вітчизняні підприємства отримують можливість докорінно пере
форматувати методи ведення бізнесу, протестувати нові технології та у підсумку підвищити
продуктивність. Проте в практиці господарювання вони можуть стикатись з бар'єрами впровадження
таких технологій через повсюдну нестачу фінансових та людських ресурсів та необхідність підтримки
процесу цифрової трансформації. Це означає, що органи, відповідальні за розробку та реалізацію економічної
політики в державі, повинні відігравати важливу роль у створенні сприятливого середовища для таких бізнес
структур, що дозволить їм розпочати інноваційні перетворення як враховуючи взаємодію з основними двигунами
цифрової економіки, так і внаслідок розробки спеціальних інструментів, які дадуть їм можливість подолати
згадані перешкоди. Вище зазначене потребує розробки та впровадження певних механізмів та важелів
підтримки таких трансформацій.

Мета та завдання. Метою даної роботи є розробка рекомендацій щодо напрямків розширення
можливостей застосування нефінансових важелів ефективного використання уречевленої праці в контексті
цифрової адаптації управління бізнес процесами.

Матеріали та методи. Теоретичну основу даної наукової роботи складають кращі практики державної
та недержавної підтримки цифрової адаптації бізнес процесів реального сектору економіки, що наведені в
роботах теоретичного та практичного характеру. Для здійснення даної наукової роботи та досягнення
поставленої мети в статті використані методи графічної інтерпретації результатів аналізу та
узагальнення, методи монографічного аналізу, синтез.

Результати. Доведено, що цифрові інновації, будучи фундаментальною рушійною силою системних
перетворень в економіці, не тільки приводять до появи нових продуктів та послуг, але також створюють
можливості для впровадження інноваційних бізнес-моделей, можуть сприяти значному підвищенню
ефективності як у державному, так і у приватному секторі. Обґрунтовано, що в процесі впровадження
цифрових технологій вітчизняні бізнес структури отримують можливість внести фундаментальні зміни до
методів ведення бізнесу, випробувати на практиці нових технологій та зрештою підвищити продуктивність.
Визначено нефінансові стимули цифрової адаптації бізнес процесів реального сектору економіки. Отже, що не
всі підприємці володіють достатніми навичками та знаннями у сфері цифровізації, що може обмежувати їх
можливості для ефективного ведення бізнесу. Встановлено, що деякі з ухвалених законодавчих актів,
структурних програм та ініціатив вже морально застаріли або отримали свою актуальність та вимагають
Non-financial levers for ensuring the efficient use of permanent work in the context of digital adaptation of business process management

Topicality. The current stage of development of the world economy is characterized by the large-scale implementation of digital technologies in various sectors and types of economic activity. Digital innovation, being a fundamental driving force of systemic transformations in the economy, not only leads to the emergence of new products and services, but also creates opportunities for the implementation of innovative business models, can contribute to a significant increase in efficiency in both the public and private sectors. In the process of implementing digital technologies, domestic business structures get the opportunity to make fundamental changes to business methods, test new technologies in practice, and ultimately increase productivity. However, in business practice, they may face barriers to the implementation of such technologies due to the widespread lack of financial and human resources and the need to support the digital transformation process. This means that the bodies responsible for the development and implementation of economic policy in the state should play an important role in creating a favorable environment for such business structures, which will allow them to start their digital transformation. The above requires the development and implementation of certain mechanisms and levers to support such transformations.

Aim and tasks. The purpose of this work is to develop recommendations on ways to expand the possibilities of using non-financial levers to ensure the effective digital transformation of Ukraine.

Materials and Methods. The theoretical basis of this scientific work consists of the best practices of state and non-state support for digital adaptation of business processes of the real sector of the economy, which are given in works of a theoretical and practical nature. To carry out this scientific work and achieve the set goal, the article uses methods of graphic interpretation of the results of analysis and generalization, methods of monographic analysis, and synthesis.
Research results. As a result of the research, it was established that the current stage of development of the world economy is characterized by the large-scale implementation of digital technologies in various sectors and types of economic activity. It is noted that digital innovations, being the fundamental driving force of systemic transformations in the economy, not only lead to the emergence of new products and services, but also create opportunities for the implementation of innovative business models, can contribute to a significant increase in efficiency in both the public and private sectors. It is substantiated that in the process of implementing digital technologies, domestic business structures get the opportunity to make fundamental changes to business methods, test new technologies in practice, and ultimately increase productivity. Non-financial incentives for digital adaptation of business processes in the real sector of the economy have been identified. It was concluded that not all entrepreneurs have sufficient skills and knowledge in the field of digitalization, which may limit their opportunities for effective business. It has been established that some of the adopted legislative acts, strategic programs and initiatives are already morally outdated or have lost their relevance and require updating in accordance with the global challenges and opportunities of the digital economy. It was concluded that it is important to create uniform rules of the game for digital innovation by adopting relevant international technical standards for digital equipment and digital services. The need to create institutions and procedures aimed at solving digital security problems, preparing for protection against cyber-attacks, fighting cybercrime, and increasing general trust of the population in digital ecosystems, which is the basis of the digital economy, is substantiated. It has been proven that an important aspect of the introduction of digital technologies is the formation of society's motivation to use digital technologies, which largely depends on the availability of digital technologies, the development and functioning of infrastructure, the implementation of state programs and platforms for the digitalization of all spheres of social and economic life. Reasonable non-financial levers for ensuring effective digital adaptation of business processes in the real sector of the economy. Proposed directions for expanding the possibilities of using non-financial levers to ensure the effective digital transformation of Ukraine.

Conclusion. The above made it possible to form a number of recommendations to the bodies responsible for the development and implementation of economic policy, regarding the expansion of the possibilities of using various tools to ensure effective digital adaptation of business processes of the real sector of the economy of Ukraine.

Keywords. non-financial levers, digitalization tools, digital transformations, reified work, adaptation, business process management.

Problem statement and its connection with important scientific and practical tasks. The current stage of development of the world economy is characterized by the large-scale implementation of digital technologies in various sectors and types of economic activity. Digital innovation, being a fundamental driving force of systemic transformations in the economy, not only leads to the emergence of new products and services, but also creates opportunities for the implementation of innovative business models, can contribute to a significant increase in efficiency in both the public and private sectors. In the process of implementing digital technologies, domestic business structures get the opportunity to make fundamental changes to business methods, test new technologies in practice, and ultimately increase productivity. However, in business practice, they may face barriers to the implementation of such technologies due to the widespread lack of financial and human resources and the need to support the digital transformation process. This means that the bodies responsible for the development and implementation of economic policy in the state should play an important role in creating a favorable environment for such business structures, which will allow them to start their digital transformation. The above requires the development and implementation of certain mechanisms and levers to support such transformations.

Analysis of recent publications on the problem. The prerequisites and stages of the formation of the digital economy in Ukraine and in the world are considered in their works by V. Geets. The works of T.V. Umanets, N.L. Shlafman are devoted to the issue of adapting business process management in conditions of digitalization. Investment-innovative levers for ensuring the social and economic development of Ukraine are devoted to the work of O.I. Laiko. The role of the state in promoting investments in the development of the digital economy is devoted to the work of Yu.V. Korneev. O.O. Skoryk pays attention to foreign experience and domestic realities of digital transformation of public administration. L.S. Shatalova examines the conceptual foundations of the development of the digital competence of the workforce.

Allocation of previously unsolved parts of the general problem. Along with sufficient work on this topic of research, the problem of finding mechanisms for ensuring effective digital adaptation of business processes in the real sector of the economy remains insufficiently developed and requires additional justifications taking into account the foreign experience of such transformations.

Formulation of research objectives (problem statement). The purpose of this work is to develop recommendations on ways to expand the possibilities of using non-financial levers to ensure
the effective digital transformation of Ukraine.

Materials and Methods. The methodological basis of this scientific work consists of conclusions regarding the analysis and theoretical generalization of scientific approaches regarding the financial support of the processes of digitalization of economic development, which are given in works of a theoretical and practical nature. To carry out this scientific work and achieve the set goal, the article uses methods of graphical interpretation of the results of analysis and generalization, methods of theoretical analysis, and synthesis.

An outline of the main results and their justification. Among the non-financial levers, we can highlight the following (Fig. 1).

![Fig. 1 – Non-financial levers for ensuring effective use embodied labor in the context of digital adaptation of management business processes](source)

Source: compiled by the authors

- Educational support. The rapid development of digital technologies is creating new requirements for the qualifications of the workforce; the possession of digital and related competencies is becoming necessary for any professional activity. At the same time, not all entrepreneurs have sufficient skills and knowledge in this area, which may limit their opportunities for effective business management.

   It is primarily about: the development of relevant professional programs, the creation of specialized educational platforms, mentoring, as well as tools aimed at encouraging innovative, entrepreneurial success and achievements (for example, awards, prizes, competitions, etc.). All these tools can and should be used in Ukrainian business practice.

- Infrastructure support. First of all, the necessary factor for the use of ICT is the physical infrastructure and the possibility of connecting to the Internet. The European Union, for example, within the framework of the Digital Single Market strategy, is developing the "Gigabit Internet in every household" strategy. «The issues of network connectivity (supply) and inclusion in online processes (demand) are thus intertwined and interdependent. Ensuring effective communication is one of the first steps on the way to the digital transformation of the economy and society. In several OECD member countries, access to the Internet is recognized as a basic human right, and the desire to "ensure universal and affordable access to the Internet" was included in the UN Sustainable Development Goals (SDGs)» (Volokh O.K. 2014). Indeed, the Internet plays an increasingly important role for both households and businesses. Businesses are increasingly using the Internet to maximize their reach through e-commerce methods, as well as the adoption of digital technologies in general. And for this, the quality and availability of broadband communication is crucial, since both established and new technologies require high-speed Internet connection.

   «The basis of the information infrastructure is the creation of a complex information processing industry based on new electronic equipment and means of communication. In addition to the production of computers and software, it covers the creation of devices and systems for the
transmission of information (communication equipment, the Internet, "e-mail", etc.), its reproduction (photocopying equipment, printing devices for computers and personal computers, etc.), production of peripheral equipment (displays, terminals, modems, fax machines, scanners, etc.). In addition, the information infrastructure includes all types of services that support the functioning of computers and other information equipment» (Volokh O.K. 2014).

Information support also involves providing quick and easy access to information about the regulatory framework for investing. Thus, a potential investor can quickly find relevant information about the investment procedure, business processes, incentive measures and favorable conditions.

«Creation of innovative infrastructure: technology parks, innovative technological centers, business incubators, innovative technological firms, objects of the information system (analytical and statistical centers, information base and network), organizations for training personnel in the field of technological management, financial structures (non-budgetary, venture capital, insurance funds, credit and guarantee organizations of the non-banking sector, banks, financial and industrial groups)» (Dovhan O.D. 2015). Currently, this tool of influence needs a lot of attention, since in recent years the number of organizations carrying out GDR in Ukraine has significantly decreased.

– Normative legal levers. Sixteen laws, fifteen draft laws, five international documents (conventions, declarations, directives), resolutions of the Verkhovna Rada and the Cabinet of Ministers, decrees and orders of the Ministries make up the legislative basis of the digitalization process of the national economy. «The implementation of the operational tasks of the "National Economic Strategy 2030" provides for the adoption of a number of laws and bylaws both in the field of the digital economy and in other areas, the effective functioning of which requires the use of digital technologies» (Vinnyk O.M. 2018). At the same time, some of the adopted legislative acts, strategic programs and initiatives are already morally outdated or have lost their relevance and require updating in accordance with the global challenges and opportunities of the digital economy. It is important to create a level playing field for digital innovation by adopting relevant international technical standards for digital equipment and digital services. The clarity provided by a carefully crafted regulatory framework can push commercial enterprises to digital transformation.

«Creating a favorable regulatory and legal environment for the implementation of the digital agenda is an extremely important task for its successful implementation. One of the conditions for a successful digital transformation is the reduction of barriers to the development (testing) and implementation of digital technologies, including through the development of regulatory provisions based on the mechanisms of "soft law" and testing of new models in "sandboxes", which allow you to quickly adapt to changes in technologies and business models. Regulatory sandboxes for alternative finance are a controlled environment in which financial technology innovation can occur while providing safeguards to manage risk. They allow banks and fintech players to experiment with innovative financial products or services, removing unnecessary regulatory barriers and reducing time to market for new ideas. This approach is used in a number of countries, for example in Finland, Denmark, Sweden and Great Britain. In Singapore, regimes of "regulatory" sandboxes" for digital innovation operate in such fields as fintech, health care, energy, transport, environmental services (waste management))» (Pro eu4digital, 2022).

Currently, in Ukraine, we can stabilize the unsatisfactory institutional support for the development of innovative activities. The interaction of business and the state in the formation and implementation of innovation policy is not yet regular in nature, does not ensure the balanced implementation of the interests of various innovation-active enterprises, especially in new emerging sectors.

– Safety levers. It is necessary to create institutions and procedures aimed at solving digital security problems, preparing for protection against cyber-attacks, fighting cybercrime, and increasing the general trust of the population in the digital ecosystems that underpin the digital economy. «As more and more transactions move online, citizens, governments, and businesses face increasing threats to digital security. The recent increase in the number of cyber-attacks on ordinary Internet users indicates a shortage of qualified specialists in the field of cyber security. There are many concepts and proposals for the elimination of such risks, for example, due to improving the qualifications of existing employees of public authorities, non-governmental organizations and business structures, or through the use of artificial intelligence algorithms» (Karpenko, O. V., Arsenovych, L.A., 2020). However, in our opinion, only a long-term strategy focused on the training
and specialization of the next generation of Ukrainian users of digital technologies will help ensure in the future a sufficient number of qualified personnel who will professionally possess the necessary digital competencies. Therefore, improving digital security requires the development of a comprehensive policy that will simultaneously cover digital security risk management, data privacy and consumer protection. It will allow not only to increase the resilience of the economy and society to cyber incidents, but also to strengthen trust in the digital economy both on the demand side (due to proper protection of users) and on the supply side (since businessmen often do not trust digital tools).

– Motivational levers. First of all, it is about the formation of a positive attitude towards new areas of knowledge in society. Thus, an important aspect of the implementation of digital technologies is the formation of society's motivation to use digital technologies, which largely depends on the availability of digital technologies, the development and functioning of infrastructure, the implementation of state programs and platforms for digitalization of all spheres of social and economic life. An important factor is the formation of new models of digital culture, models of behavior and communication of people related to changes and the introduction of digital technologies. Certain developments in this direction are: the organization of international conferences and forums (Prokopchuk M.B., 2021, Pustovarov A. I., 2020). We note that all stimulation tools must be deeply integrated with each other and with other levers of scientific, technical and innovative activity, which will allow us to speak about the systematic use and synergism of the action of various development mechanisms within the national digitalization system of the country. Directions for expanding the possibilities of using non-financial levers to ensure the effective digital transformation of Ukraine are given in the table. 1

### Table 1

**Directions for expanding the possibilities of using non-financial levers to ensure the effective use of embodied labor in the context of digital adaptation of business process management in Ukraine**

<table>
<thead>
<tr>
<th>Non-financial leverage</th>
<th>Educational</th>
<th>Infrastructural</th>
<th>Normative and legal</th>
<th>Safe</th>
<th>Motivational</th>
</tr>
</thead>
<tbody>
<tr>
<td>the widespread penetration of digital technologies and their rapid development creates new requirements for the qualifications of the workforce</td>
<td>creating incentives for promoting commercial innovations by providing information, technical knowledge, providing access to information and educational services</td>
<td>provision of effective Internet communication</td>
<td>improvement of regulatory and legal support for the implementation of the digital agenda</td>
<td>development of comprehensive measures covering simultaneously digital security risk management, data privacy and consumer protection</td>
<td>review of models of functioning of cultural and educational institutions</td>
</tr>
<tr>
<td>low quality and availability of broadband Internet connection</td>
<td>possession of digital and related competencies, the ability to work in a high-tech digital environment</td>
<td>the introduction of digital technologies into the economic activity of subjects of the national economy</td>
<td>creation of a favorable institutional environment for the development of IT enterprises</td>
<td>strengthening trust in the digital economy both on the part of users and on the part of businessmen</td>
<td>preparation of citizens from childhood for &quot;digital&quot; socialization and culture, stimulation of popularization activities</td>
</tr>
<tr>
<td>unsatisfactory regulatory and legal support for the development of digitalization</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>citizens, governments and businesses face an increasing threat to digital security</td>
<td></td>
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</tr>
<tr>
<td>unsatisfactory level of systematization, orderliness and purposefulness of the popularization activities of the state</td>
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Source: compiled by the authors
Conclusions and perspectives of further research. The obtained results made it possible to form a number of recommendations to the bodies responsible for the development and implementation of economic policy regarding the expansion of the possibilities of effective use of temporary labor in the context of digital adaptation of business process management in Ukraine, in particular:

Recommend developing a comprehensive educational program for acquiring digital competences and maintenance skills for the introduction of technologies into production activities. In the EU, 21 competences have been defined as such and corresponding programs for the adaptation of citizens have been developed. Involve teachers in the development of strategies and ways of developing digital skills within educational programs, as they will implement such strategies in practice and evaluate their feasibility. Such programs will be important in equipping future workers with the skills required in the digital economy.

It is also important to create conditions for the so-called non-formal education. This segment of education is much more flexible regarding the transfer and implementation of innovative teaching methods in Ukraine. It is worth simplifying their licensing, the terms of partnership with the state regarding the use of premises for educational events.

Develop measures to train managers and employees of enterprises in the skills necessary for digital transformation. Such activities include raising awareness among managers of the different types of training available and the possibility of using local communities to access relevant skills and share best practices.

Develop local digital transformation communities that will include all organizations and all stakeholders (eg incubators, high-tech parks, digital innovation centers, universities) coordinate their work to maximize the effectiveness of the efforts of existing structures. The state could take over the management of such systems and select participants and initiatives, coordinate the training process, provide funding necessary for the exchange of expert knowledge and the development of public-private cooperation. Such ecosystems can play an important role, as incubators, technology parks and cluster associations are in constant contact with enterprises, understand their needs through a wide customer base and are well aware of what works particularly well and what does not.

Develop measures to increase the awareness of individuals and enterprises in digital security issues, including trainings, seminars, practical classes on cyber security and special events. Develop training programs on cyber security.

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