MANAGEMENT

STRATEGIC IMPERATIVES AND TRENDS OF TRANSFORMATIONS

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KYIV NATIONAL ECONOMIC UNIVERSITY
NAMED AFTER VADYM HETMAN

MANAGEMENT: STRATEGIC IMPERATIVES AND TRENDS OF TRANSFORMATIONS

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Against the backdrop of rapid global economic and environmental changes around the world, management is also transforming in most industries and areas of activity. The monograph explores the challenges in the social, economic, educational and cultural imperatives of management. Possible ways of management adaptation associated with such global trends as innovation activity and digitalization are also discussed.

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CONTENT

Foreword

The radically rapid changes characterizing the world today affect the complexity of adapting to them the development strategies of both countries and organizations faced by top management. Despite this, the understanding of modern trends in transformations and new challenges of the VUCA-world largely determine the current geopolitical, socio-economic, environmental and technological changes taking place in the world as opportunities for expanding business, testing new models, reengineering and digitalizing business processes, and not as crisis phenomena and threats.

The objective needs to study the key fundamental requirements or the so-called strategic imperatives inherent in modern transformations, which should be considered mandatory for building a strategy of the organization development in all areas of business, which actually determines the relevance and timeliness of research presented in the collective monograph. The participation of academics from higher education institutions from Italy, Latvia, Georgia, Romania, Bulgaria, Belarus and Ukraine greatly enhances the benefits of this research study. This suggests that the presented research results are multidisciplinary, which take into account different points of view on a certain range of debatable issues faced by different countries, as well as the formation of various strategic alternatives for their settlement.

The collective monograph contains four sections, which highlight issues related to the study of current challenges and new needs for management in the era of digital transformations;

researching the impact of digitalization on the management of both non-profit and business organizations and their operating models; analysis of strategies for managing innovation and intangible assets of the organization; assessment of the impact of global challenges on behavioral reactions and processes of human formation, not as a consumer, but as a person with inherent values and cultural codes; conceptual development of organizations in the financial sector, healthcare, education and science, etc.; updating equally important aspects of cross-cultural management, value-oriented management and management of organizational culture.

It is difficult to consider the entire multidimensional complex of modern problems, strategic imperatives and trends in management transformations within the framework of one monograph. But the conducted interdisciplinary research explores issues that allow the integration of various scientific approaches to solving urgent problems. Kyiv National Economic University named after Vadym Hetman in particular the Management Department invites all stakeholders for further scientific discussions and research.

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CHAPTER 1. DIGITALIZATION IMPACT ON THE NEW MANAGEMENT SYSTEMS FORMATION

SHIFTED CHALLENGES IN TERMS OF DIGITAL ECONOMY

Lekashvili Eka

Introduction. We live in the world where, in one 's hand, the pace of the new technologies development is accelerating, but in the other 's hand, the social-economic inequality is increasing not only between developed and developing countries, but also within the country's society. In frame of numerous uncertainties effectively overcoming of the economic policy problems needs coordination of government, science and business activities.

The situation is complicated by 2008's global financial - economic crisis, and also, by Covid-19 pandemic crises, resulting the world economy under particular stress and recession. People had hoped that the Fourth Industrial Revolution and the digital economy would be an effective response to the "sick" economic growth of developed countries, especially in term of social distancing. Industrial Revolution 4.0 and the digital economy create a particularly complex socio-economic configuration. Assessment Industry 4.0's outcomes are a very important when the global socio-economic situation is such a stressful one.

Actuality of the research problem. What must take into account economic policy makers in process of formation and development economic strategies to be able to overcome the

challenges of the digital revolution and benefit from its progressive results? And what are the dangers of technological development, considering of which in the economic policy will be possible to mitigate the negative effects of industry 4.0? To answer these questions, we **aimed** to conduct a bibliographic study based on the modern advanced scientific researches and to systematize the expectations and challenges of the development of the digital economy by using induction and deduction methods. The results of the study will help us to foresee the generalized future concept of economic policy. During the research, we selected the latest and highest-ranked scientific papers, the induction method succeeded in identification of research results, and finally, we made systematization of the results selected studies by using method of grouping.

During the research process, we have studied the works of Kovacs (2018), Nguyen et al. (2019), Bossler and Holt (2012), Remeikienes, Gaspareniene and Schneider (2018), Ukolov et al. (2018), Baur, Hong and Lee (2017) and others, where are presented different subjective assessments about digital economy, its' interdependence to the economic development, theoretical economic model, productivity, shadow economy, various institutional mechanisms and etc. (Gvelesiani, 2018; 2019[1]. Gogorishvili, 2018[2].)

Main part. The digital economy is a high-tech part of the economy that is in line with the ongoing changes in the production

[1] Gvelesiani R. Role of Assessment in Decision Making and Empirical Examination of Their Results, volume 18, № 2, 2018, Las Vegas, Nevada, p41-44, www.iabe.org Gvelesiani, R. The problem of making optimal decisions on the implementation of economic policy objectives, The 2nd International Conference on business, Management and Economics**, I**SBN:978-609-8239-66-9 , The Acavent, Vienna School of International Studies, Vienna, Austria, 21-23 June 2019, https://www.icbmeconf.org/june-2019-vienna/

[2] Gogorishvili I. (2018). Small and Medium Enterprise Perspective in the Development of Digital Economy, E-Book of Abstract, Fifth Business Systems Laboratory International Symposium, Cocreating Responsible Futures in the Digital Age: Exploring new paths towards economic, social and environmental Sustainability, University "Federico II" of Naples, January 22-24.255-257. ISBN 9788890824265. http://bslab-symposium.net/Napoli-2018/BOA-BSLAB-Symposium-2018.pdf

process. It uses virtual space capabilities such as the Internet, computers, information, information technologies, and artificial intelligence.

Digitization is a method that connects the virtual sector of the economy with the real sector. A digital platform includes digital resources, which suggests services and content information. It provides a value-creating relationship between the entrepreneur and the customer. Digital platforms are the highest peak of digital infrastructure. These include the Internet, data centers, smart phones and tablets. Easy-to-access digital infrastructure is vital for new digital risky ventures.

Digital technology is the representation of information in bits. It reduces the cost of storing, computing and transmitting information. Accordingly, the research papers about digital economy studies the influence of digital technology capacity on economic activity.

Oliver Kovacs[3] (2018) in his work with the industry "The dark corners of the industry 4.0 – Grounding economic governance 2.0." analyzed the Fourth Industrial Revolution, which shifts society to the more difficult economy. The author concentrates on the complexity of interacting with Industry 4.0 and the digital development process, which can lead to uncertain results and calls on the government to make structural changes. In addition, the author suggests the basic principles of the new economic governance in the process of the contemporary industrial revolution and the emergence of the digital economy development by contribution of a sustainable development.

The paper presents Industry 4.0 and the realistic picture of the digital economy with its bright and dark sides. The author believes that without this type of analysis, we will have simply confusing perceptions of the modern economy, because uncertainty is constantly increasing. Accordingly, it is important for government interventions to promote industry 4.0 and the digital economy and reduce the losses resulting from their development.

[3] Kovacs O. The dark corners of industry 4.0 - Grounding economic governance 2.0. Technology in Society. 55 (2018). pp.140–145.

The study contains 4 "dark" aspects of industry 4.0 and digitization. These include security uncertainties that are not only related to cyber security (data protection, system hacking, cyber resilience, cyber terrorism, credit and debit card fraud, etc.), but also increase the risks of the innovative eco system.

The author discusses 4 "dark" sides of industry 4.0 and digitization:

1. The impact of automation on employment that increases the rate of release of people employed by computerization (Kovacs 2018, 141). This means acceleration of young people and widespread slowdown low-qualified older employment. With the loss of jobs, the insolvency of the population will increase significantly, leading to the bankruptcy of individuals.
2. The second negative result is the impact of computerization on people's mental condition. Digitization and automation can harm people's mental and physical health. Information and communication technologies, makes it possible to work in 24 hours, so executives will have the expectation that they will be able to be very fast actions. This will break the work-life/leisure time balance and increase stress.
3. Significant problems arise with respect to statistics of information technology. The risks and uncertainties in this area will be related to the following situation: on the one hand, Information and Communication Technologies (ICTs) penetrate everywhere and everything, leading to the need to revise the statistical methodology. Productivity statistics will increase, that is, from digital fixed assets to digital services (data processing, computing, and network design, and so on). The second aspect of this issue which is linked to this problem is Big Data - based analyses, which will accelerate our scientific perception of the world through numbers. New forecasting approaches will be strengthened. However, the changes in the financial market will be more explained by psychology than by macroeconomic principles. This will, of course, be a big challenge for large databases, because it cannot reflect the innumerable, difficult to measure aspects.

4. Problems will result in negligent neglect of contextual links. The first set of unintended consequences arises from a backward interaction between developed and developing countries. In particular, low-wage competitiveness will be replaced by low-tech competitiveness, which will deepen inequality and make the economy less inclusive. The second problem arises, when the scientific community “will start skating" in a different time horizon of financial markets and industrial policy, because the financial sector will be focused on short-term investments, while the industrial sector - the long-term. That is why for sustainability industry 4.0 is important establishing a culture of long-term lending. The third of them arises in terms of neglecting 'mutual play' between the flexibility of the labor market and industrial policy. It is important to make the labor market more flexible to reduce the side effects. This means that innovative companies will be able to hire and fire more easily, requiring less regulation of the labor market. This will complicate the development and implementation of appropriate welfare policies.

Thus, in the author's view, the success of Industry 4.0 and the results of the digital economy depend not only on the technical flexibility of the transformation but also on social acceptance. He suggests recommendations for Economic Governance 2.0, which should contribute to the sustainable development of industry 4.0 and the digital economy. He also sees the need of developing a new economic thinking, which means combining economics with a complex approach to science to get a real picture of the phenomenon (industry 4.0) and the policies that support structural change.

With rising of the digital economy and increasing of the electronic activities, unhealthy financial benefits from digital businesses have increased. However, as noted above, due to the imperfection of the statistical methodology, a significant portion of the economic operations in digital business are unrecorded. Consequently, one of the major challenges of the digital economy is the strengthening of the digital shadow economy.

There is a lack of scientific research about the digital shadow economy. However, interesting insights into the interpretation of the

digital shadow economy have been offered by researchers of the University of Michola Romer (Lithuania) R. Remeikiene, L. Gaspareniene and F.G Schneider [4]. According to the authors, the study was aimed at introducing the definition of digital shadow economy, based on its characteristics. Accordingly, the study deals with illegal digital activity, which covers the criminal and economic aspects of the digital economy. Also, the study deals with illegal digital activity, which covers the criminal and economic aspects of the digital economy. The shadow digital economy considers the production of digital services and the online sale of goods, that are carried out directly in the digital space and, for the sake of illicit interests and for the purpose of material gain, do not envisage legal norms and regulations. The research method is based on scientific literature analysis and expert evaluation.

However, the lack of official statistics made it difficult to elaborate on the definition of the digital shadow economy. Focusing on cybercrime and cyber piracy does not explain the nature of the shadow digital economy, so it is necessary to improve the methodology of evaluating the shadow economy based on its features and channels.

According to Bossler and Holt[5] (2012), the main part of the shadow economy is generated in the digital space. Therefore, without a clear definition of the shadow digital economy, it is impossible to properly analyze the issue and develop policies. He even found the bottom on a stage is considered to be profit-oriented Internet-based

[4] Remeikiene R., Gaspareniene L., Schneider F.G. The Definition of Digital Shadow Economy. (2018). Technological and Economic Development of the Economy. Volume 24 (2). pp. 696-717. Gasparėnienė L., Remeikienė R., Ginevičius R. & Schieg M. (2018) Adoption of a mimic model for digital shadow economy estimation . Technological and Economic Development of the Economy. 24 / 4. pp.1453-1465 / Last Seen 11 September, 2019 /.

[5] Bossler A. M, Holt T. J (2012). Patrol officers' perceived role in cybercrime responding, Policing an International Journal of Police Strategies & Management: 35 (1): 165–181. https://doi.org/10.1108/13639511211215504/ Last Seen 20 May, 2019 /.

activities of unregistered and illegal revenues, which are generated from online trade and services (Zorz, 2015)[6].

It is noteworthy that the term digital shadow economy also refers to activities carried out by consumers, buyers, related to electronic piracy, copyright infringement and electronic fraud, thus depriving the producer of revenue and cash flow.

In response to the information needs of digital enterprises, it is important to set up real databases to enable data collection and analysis as digital information becomes a key factor in the manufacturing process (Ukolov et al. 2018)[7].

By digitizing it is possible to create a virtual clone of the object and produce a complete copy of it. The digitization process focuses on the technological features and optimal model of all phases of the manufacturing process.

Such capabilities significantly increase the effectiveness of technology installations, protect their security and monitor.

The study by Ukolov et al (2018)[8] is aimed at exploring the need to accelerate digitization in order to enhance the competitiveness of corporations in global energy markets. Digitization of the Russian economy, like many countries, is at the stage of data accumulation and free access, which increases the opportunities for development of the digital e-industry.

The research hypothesis of this scientific article can be used to explore opportunities for digitization in other sectors of the industry and to formulate strategic approaches to practical economic policy.

In recent years, there has been a growing interest in digital platforms, especially for companies that have achieved business success in a short time based on the digital platform. They include Alibaba, Amazon, Facebook, Google, etc. Many of the oldest

[6] Zorz M. (2015). Global black markets and the underground economy [online], [cited 12 October 2015]. Featured News. Available from Internet: http://www.net-security.org/article.php?id=2288 / Last viewed May 20, 2019 /.

[7] Ukolov V.F., Afanasyev V.Y., Vorontsov V.B., Baikova O. V., Bolshakova O. I. (2018). Digitalization of Economics and New Risks in the Leading Industries of FEC. Helix Vol.8. E-ISS N: 2319-5592; P-ISSN: pp. 2277-3495.

[8] The same (5)

companies have begun investing heavily in adapting to these platforms, including mechanical engineering, oil production, heavy machine installations, and so on. Manufacturers who make significant gains through platformization.

Researching problems of digital economy has attracted a significant attention number of researchers to the issue of digital money as it brings to the fore a whole new reality of financial and economic relations at both - national and global levels. Digital money - as an important resource of the economy, accelerates turnover and commodity monetization in general, completely reproducing the process, reducing labor costs and creating new opportunities for economic entities.

Even in Georgia, where there is a shortage of financial resources, issues of digital currency production, income generation and other related issues are drawing the attention of economists. The essence of digital currency and its characteristics are discussed in the scientific papers of Prof. D. Sichinava[9] (2019), I. Gagnidze[10] (2019), I. Gogorishvili[11] (2019) et al. The studies mainly focus on digital currency trading and regulation, as Georgia ranks second in the world after China in terms of digital money production and trade. In addition, the Government of Georgia promotes the development of Bit coin platforms both in the private sector (production systems are located in free economic zones) and in the public sector, which in turn has given the public greater interest in digital currency

[9] Sichinava, D. Cryptocurrency - A future medium of exchange (2019). Economics and Business, Vol.11 Issue 1 (19). Iv. Javakhishvili Tbilisi State University.

[10] Gagnidze, I. (2019) Future challenges and the problems of development of the Circular Economy Business models. Proceedings of the International Scientific and Practical Internet Conference "BUSINESS STRATEGY: FUTUROLOGICAL CHALLENGES". ISBN 978–966–926–310–0. KNEU, Kyiv, 20-22 November. pp.13-18.

[11] Gogorishvili, I., Gagnidze, I., Papachashvili, N.(2019) Innovative Approaches in Higher Education System, 6th Business Systems Laboratory International Symposium, BORDERS WITHOUT BORDERS: Systemic frameworks and their applications for sustainable well-being in the global era. BOOK OF ABSTRACTS. ISBN 9788890824272, Pavia, Italy, Ab.56 http://bslab-symposium.net/Pavia-2019/BSLAB-%20Book%20of%20Abstract-Pavia-2019.pdf#page=214

generation[12]. "However, Georgia has the second largest Bit coin data center." [13] It is noteworthy that the providers involved in this business believe that, in contrast to the state-controlled, centralized, closed system of government and corporations and the secrecy of their management decisions, decentralized, open and transparent crypto systems work perfectly in the processes and challenges modern interconnected world.

Interesting research on digital money – Bit coin has been conducted by Baur, Hong, and Lee[14] (2017). They define Bit coin as digital money in a decentralized co-payments network. It is a hybrid of commodity and paper currency that is independent of government and monetary rulers and has no substantive value.

The article analyzes the static properties of Bit coin and finds that it is not correlated with traditional assets such as stocks, bonds, etc. In both normal and financial volatility. The data analysis of Bit coin account transactions shows that it is mainly used as a speculative investment and not as an alternative currency or intermediary component of the exchange.

Bit coin is preferably considered an asset because it does not carry all the functions of the currency (the currency has the function of payment, value measurement and accumulation – author). It attracts potential users of virtual currencies with low transaction costs, proportionality, globality and government-free design. However, it may be possible to purchase illegal goods (drugs, weapons, etc.). It is regarded as a speculative tool. Demand for assets and prices can be much variable.

Thus, the success of Bit coin or similar alternative currencies or assets is related to the state of the currency and financial assets in question. Baur, Hong, & Lee's[15] (2017) study confirms that Bit coin

[12]https://www.bm.ge/en/article/diplomebi-blokchein-platformaze-gantavsdeba/38452 Last viewed September 24, 2019 /

[13] http://www.iset-pi.ge/index.php/en/iset-economist-blog/entry/2017-07-07-10-19-51 / Last viewed September 24, 2019 /

[14] Dirk G. Baur, Kihoon Hong, Adrian D. Lee. Bit coin: medium of exchange or speculative assets? (2017). Elsevier BV Journal of International Financial Markets, Institutions and Money. pp.177-190.

[15] The same (12)

is mainly used as a speculative investment due to its high volatility / volatility and high returns.

Interesting research on crypto currencies as financial assets belongs to Corbet, Lucey, Urquhart, and Yarovaya [16](2018). The study provides a systematic review of empirical literature related to the development of crypto currencies as a financial asset market since 2009. Using a systematic analysis approach, the researchers aimed to delve deeper into the field and identify unexplored "cracks". Systematic analysis is a powerful tool for scientists, professionals, and policy makers in the field of knowledge, consent and uncertainty around the issue.

The authors conclude that most of the studies address the questions of positivism, though philosophical, scientific paradigms are more important for practitioners and policy makers. The paper provides recommendations on which areas to diversify crypto currency research. Specifically, such issues include expanding the database of crypto currency studies; Research on the legal, economic and regulatory issues of crypto currencies; Issues of information asymmetry; Theoretical development; Alternative Potential Benefits of Block chain Consumption; Valuation of crypto currencies as an asset; the issue of environmental change with regard to crypto currencies, etc. However, the authors pay great attention to the triad of problems: disorientation of regulation, price spikes and cybercrime.

However, it is important to consider cyber risks - there is a threat from hackers. Terrorists and other criminals can easily use it. Because of this, the risk of banning it is high. In addition, the transaction is not insured - the currency cannot be returned after the executed transaction. While this currency is unofficial so far, there is a chance that you will be misled by any Bit coin exchange service. In the period of the financial crisis, crypto currencies in fact have been created for higher security than traditional money and assets, but as reality shows, bankruptcy and hacker attacks are still permissible here. In addition, victims of bankruptcy of crypto currency

[16] Corbet S., Lucey B., Urquhart A., Yarovaya L. (2018). Crypto currencies as a financial asset: A systematic analysis. Elsevier BV International Review of Financial Analysis. pp.182-200.

exchanges lose everything because of the lack of regulatory mechanisms.

Thus, crypto currencies are a high-risk investment, with high returns. Crypto currency market is controlled by no one, and it is only a mechanism to regulate the market, respectively, characterized by strong price volatility and creates favorable conditions for speculative transactions. However, it should be noted, that without proper scientific theoretical elaboration of the crypto currency issue it is not possible to identify and retrieve regulation policy instruments[17].

Researchers in digital economics theory (Rogers[18], 2018) believe that models of limited resources and monopoly no longer fit into the digital age. This applies to both commercial entities and the state. Commercial Block chains will in future compete with state Block chains based on structural advantages. According to Rogers, "the effects of an open, public Block chain-based network are definitely greater than any private system".

With the advent of electronic money and increasing complexity, the relationship between financial centers and political power in society will change: finances will be based on security, and security will be based on finances. Accordingly, Block chain is only one component of the control of the extending techno-hybrid power in which humans are currently present.

The behavior of crypto currencies as an investment asset has attracted much attention from researchers and investors lately. The research (Nguyen et al.[19], 2019) shows that the response of crypto currencies to macroeconomic policy has proved ineffective. The

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[17] Lekashvili E., Mamaladze L. Crypto Currency - A New Challenge for the Georgian Economy. Copernican Journal of Finance and Accounting (2018, volume 7, issue 4). DOI: http://dx.doi.org/10.12775/CJFA.2018.022 ISSN 2300-1240 (print); 2300-3065 the ISSN of the (an online) / Last Seen 24 September , 2019 /.

[18] Rogers Z. Blockchain and the state: Vehicle or vice? Australian Quarterly, Vol. 89, No. 1 (JAN-MAR 2018), pp. 3-9, 44. Australian Institute of Policy and Science. https://www.jstor.org/stable/26450190 . / Last Seen 24 September, 2019. /

[19] Nguyen T.V., Nguyen B.T., Nguyen K.S., Pham H. Asymmetric monetary policy effects in crypto currency markets. Elsevier BV Research in International Business and Finance 48 (2019). pp. 335-339.

asymmetric effect of monetary policy on crypto currency yields under strict and soft monetary policy regimes has been investigated.

Interestingly, that the study showed the response of four major crypto currencies, including Bit coin to China's tight monetary policy, while US monetary policy did not have a significant impact on crypto currency revenues.

In addition to researching digital currencies, the interest of scientists in studying the economic nature of digital goods has attracted much attention. T. Rayna's[20] (2008) authored work investigates the economic nature and characteristics of digital goods. There are also two practical issues involved in identifying the issues of massive consumer piracy and the value of digital goods. It deals with cases where users produce, distribute and change digital goods without having to spend money on them.

However, the author rejects the idea that traditional economics cannot work in the digital economy and that the "new economics" is needed. This result derives from the following fundamental economic features: digital goods are easily replaceable (it is possible to produce copies without loss of quality and information). Digital goods are public goods and durable goods. However, some digital goods are trial goods and will not be marketed.

Studies are also being conducted on the interrelationship of digital technologies and economic growth. The scholarly article by Qu, Simes, and O'Mahony[21] (2017) provides new empirical evidence that emphasizes the importance of digital technologies in promoting economic growth. It assesses the long-term economic impact of digital technologies based on indicators of mobile phone and internet use. The article presents the results of improving Australia's economy through the impact of digital technologies in 2004-2014.

[20] Rayna T. Understanding the Challenges of the Digital Economy: The Nature of Digital Goods, Communication & Strategies, no.71, 3 rd quarter 2008. pp.13 - 33.

[21] Qu J., Simes R., O'Mahony J. How do Digital Technologies Dive into Economic Growth? Economic Record, vol.93.Issue, June, 2017. pp.57-69.

Other studies (Golddfarb & Tucke[22], 2019) provide insights into the impact of digital technology changes on economic activity. According to the authors, understanding the content of the effects of digital technologies does not require a new economic theory. It requires different accents. The question arises, what is the difference? What can be done easily when the information is in bits and not in atoms? Digital technology often means that spending can hinder economic activity. Consequently, the digital economy explains the changes in standard economic models, when specified costs fall substantially, or at least equal to zero. The authors classify these costs into five groups:

1. Lower search costs.
2. Lower cost of propagation.
3. Lower transportation costs.
4. Lower tracking costs.
5. Less verification / verification costs[23].

Each spending change creates an improved economic model. However, digital economic literature is increasingly influenced by areas such as economic crime, public goods economics, organizational economics, finance, urban economics, labor economics, development economics, public finance and international economics. According to the author, the digital economy can be seen as a way of thinking that deals with many aspects of the economy. However, digitization has different consequences for countries, regions, firms and individuals. It affects productivity, trade, the economic role of cities, national and international outsourcing, and how people spend their leisure time.

An important issue in the modern stage of digital technology development is the control of commercial internet activities in the historical context of decentralization. Commercial interests competing with each other should also be taken into consideration. Consequently, the main problem of digital technologies is related to openness and control of information.

[22] Golddfarb A., Tucke C. Digital Economics. Journal of Economic Literature 2019, (57), pp.3-43. https://doi.org/10.1257/jel.20171452 . / Last viewed September 24, 2019 /

[23] The Same (21)

Information literacy among professional competencies is also important, which should be reflected in the content of educational programs at all levels of education.

Thus, the systematization of the results of the analyzed scientific literature shows the multiplicity of expected negative outcomes, whose existence and origin require more literary readiness from the modern citizen and government. The negative effects are linked to a number of uncertainties, the expected decline in the employment of under-aged people, the increase in stressful working conditions for managers, the unfair distribution of income, the growth of the digital shadow economy, cybercrime, the rise of ill-advised financial gain that will enhance financial Sector and increase the value of speculative assets. As a result, regulation will be complicated, prices will rise. The links between financial centers and political power will become even more important.

From an economic point of view, digitizing the economy may require huge additional costs, but ongoing operations reduce the costs of searching, multiplying, transporting, tracking and verifying information. However, the emergence of digital money accelerates turnover. It is cheaper, faster, and more global in content than traditional cash. In order to facilitate the formation of databases, it will be necessary to develop an information production accounting methodology. In order to find effective tools for managing these and other challenges, it is important to establish a new economic mindset on the basis of which a new economic model in the form of a digital economy should be explored.

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TRENDS OF DIGITAL TRANSFORMATION IN THE MODERN MANAGEMENT

Holionko Nataliia
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In the modern business environment organizations most, important trend is a digital innovation and implementation of all its possible manifestations. It is not so important to have a long history of success or a large number of real estate and assets, the new competence and ability of the 21st century is coming to the fore - to change quickly and effectively, as well as to adapt your business to the new conditions. This is now digitalization.

We will understand by digitalization the introduction of digital technologies in all spheres of life: from interaction between people to industrial production, from household items to toys, clothing and more. We agree with the authors of Ukraine - 2030E that digital technologies have become the basis for the creation of new products, values, properties and, accordingly, the basis of obtaining competitive advantages in most markets[24].

In recent years, a number of new digital technologies have emerged - big data, paperless technology, artificial intelligence, virtual and augmented reality, the Internet of Things, others that help innovate businesses, their business processes, increase profits and increasing their competitiveness. But at the same time, in order to achieve such results, organizations need to make significant changes to existing, mostly classic, management systems. It is the management of organizations, according to the experience of the world leading companies, that should be the first to adapt to new digital ways of communication, information technology and technological innovation, to strive to change the organizational structure based on new priorities in client orientation and support of partners, which will have the combined effect of synergy. The transformation of existing physical products, processes, and business

[24] Ukraine 2030E is a digital economy. - Ukrainian Institute of the Future. - [Electronic resource] - Access mode: https: //strategy.uifuture.org/kraina-z-rozvinutoyu-cifrovoyu-ekonomikoyu.html.

models of an organization that underlies the effective use of digital technologies is essentially a digital transformation. The purpose of which, if properly managed, is to significantly increase the efficiency and productivity of the organization, as well as the value of its products and services.

At present, relationships in the digital economy, where the key drivers and means of production are digital data and network transactions that are formed around the security and mutual trust of market participants, are creating fundamentally new business models of engagement. Modern approaches to the use of artificial intelligence, virtual reality and the accumulation of large amounts of data are an important capital of the digital economy on a par with the usual material assets for organizations.

It is not possible to imagine any sector of the economy today without the use of the latest digital technologies and modern approaches to management. Transformational processes of transition from industrial to informational, and further to digital, activities are taking place at a very rapid pace, which has a significant impact on society as a whole.

Yes, it is worth noting that at present there are already such business organizations in the world that form at least one separate line of business, wholly or partially relying on virtual and information space, create updated digital and network structure, and also partially or indirectly use Artificial Intelligence. There is a so-called integration of digital technologies into a particular business area, which over time leads to fundamental changes in the way businesses and organizations operate, how they deliver value to themselves, their employees, customers, partners, reaching their own and common, economic and social goals faster, cheaper and with new quality.

In this experience, the defining characteristic of any entity in the person of their management is decisive. That is, there is now an update on the awareness and implementation of the challenges of today, as well as the hard work of making changes to any management system. That is why the question of tracking the impact of the most significant digital transformation trends and the corresponding transformation of the enterprise management system

itself is relevant and important for the further creation of a competitive market for its business players.

The birth of the era of modern digitalization dates back to the last decades of the twentieth century with the development of, in particular, the American scientist D. Bell[25], who first began to study the latest transformational processes of the transition from the post-industrial to the information era. At the same time, professor of the Tokyo Institute of Technology Yu. Hayashi was offered an interpretation of the term "information society"[26], which in turn became the impetus for modern digital development.

Significant introduction and spread of the current digitalization took place in the 90s of the XX century, when the online sale was first made on the subsequently known world Amazon.com, and eBay.com started operating. The term "digital economy", as an economic activity defined through network intelligence and dependent on virtual technologies, was proposed by D. Tapskot[27]. Over time, synonyms have emerged such as the Internet economy, digital economy, and others. It should be emphasized that the leader in the world of digital search is the United States, whose economists are even before the beginning of the 21st century emphasized in the works about the new digital agenda. Instead, in 2010, the European Commission adopted the Digital Agenda for Europe only in 2010, noting in particular the impact of ICTs and the Internet on shaping the digital economy.

P. Danlivi, H. Margets and J. Tinkler[28] should be considered the founders of digital government. These scientists have proposed the Digital Era Governance (DEG) concept, which is based on three basic principles: reintegration, customer-centricity and digitalization.

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[25] Bell D. The Future Post-Industrial Society. Social Forecasting Experience / Daniel Bell; translation from english. ed. VL Foreigner. - M .: AKADEMIA, 1999. - 956 p

[26] Machlup F. The production and Distribution of Knowledge in the Unated States. Princeton, 1962; Dordick H.S., Wang G. The Information Society: A Retrospective View. Newbury Park — L., 1993.

[27] Tapscott, D. The Digital Economy: Promise and Perilin the Age of Networked Intelligence. McGraw-Hill, 342, 1995

[28] Dunleavy P., Margetts H., Bastow S., Tinkler J. Digital Era Governance: IT Corporations, the State, and e+ Government. OUP Oxford. 304 p.

Each of these elements forms an aggregate up-to-date view of management within the business unit. According to the concept authors themselves, this was the first attempt to describe the transformation processes of transformation that began in the late 1990s. In the future, with the development and spread of social networks, the emergence and introduction of various technological innovations, a "second wave" of digitalization emerged, which in its content has increased and increased pressure on society, which accordingly affects the management systems of business entities. Along with this, it is worth mentioning other scientific achievements of the impact of digitalization on the economic situation of countries.

Therefore, the further development of the concept of digitization was taken care of by A. Williams and H. Hay[29], as well as by European scientists who discovered the essence of the conceptual categorical apparatus, analyzed and evaluated the impact and strength of changes in digital technologies on the world and specified the determinants of the success of the latest in their time definitions. Among such scholars are P. Danlevi[30], H. Margets, S. Bastow and J. Tinkler[31], L. De Nardis[32], and others.

For Ukraine, issues of digital change have been urgent since the beginning of the century, but at the state level, the conceptual framework for digitization was developed only in 2016, when they became part of the Digital Agenda of Ukraine 2020. In the domestic scientific field, it is also worth noting the work of various scientists. S. S. Veretyuk and V. Pilinsky[33] take care of the promotion of the idea of digital economy in domestic business both in theoretical and

[29] Williams, A. and Hay, H. (2000), "Digital-era policy making", in: Governance in the Digital Economy

[30] Dunleavy P. New Public Management is Dead – Long Live Digital-Era Governance / P. Dunleavy // Journal of Public Administration Research and Theory. – 2005. – September

[31] Dunleavy Patrick, Margetts Helen, Bastow Simon & Tinkler Jane, Digital Era Governance: IT Corporations, The State and E-Government. – Oxford: Oxford University Press, 2006. – 302 p.

[32] DeNardis Laura. The global war for Internet governance / Laura DeNardis. – Yale University Press, 2014.

[33] S M Vertyuk, V V Pilinskiy Identifying priority areas for the digital economy in Ukraine. Scientific Note of Research Communication. -2016.- # 2 (42). - P.51-58.

applied context. Other scholars formulate visions, methodological foundations and investigate the impact of the current trend on the economy of the state. Among them are L. Matviychuk[34], NM Kraus, O. Goloborodko, K.M. Kraus[35].

On the whole, it should be emphasized that the increasing impact of digital innovation on society and the economy, in particular, has been progressing lately. Scientific developments of domestic and foreign scientists have considerable dynamics, but innovations and the overarching effect of change give only new impetus to scientific research.

In recent years, digital changes in the global context are occurring with greater reach. They relate to different spheres of activity and directly affect the management of individual entities, which was especially noticeable with the expansion of the boundaries of business activities and the complication of relations between partners, consumers, competitors, the state, increasing the volume of information.

In order to determine the main trends of digitization and to trace their impact, we consider it advisable to present a study of the School of Law and Diplomacy Tufts University Fletcher (Table 1). This study was conducted using the method of interviewing the population and economic entities of the countries, which consisted of three blocks of questions, totalling 170 questions of the direction and status of digitization.

According to the research, four types of countries were identified by the state of their digital economy, namely, problematic, slow-moving, promising, and leaders. For a more thorough awareness, we will present the characteristics of each group of countries.

1. *Problem countries* are countries that are at the lowest level of digitalization and do not differ in revitalizing its dynamics, and in some cases have the opposite decline in the development of the digital economy. Under these circumstances, the most appropriate

[34] L. O. Matveychuk Digital Economics: Theoretical Aspects / Bulletin of the Zaporizhzhya National University, No. 4 (40), 2018. - p. 116-127.

[35] Kraus NM Digital Economy: Trends and Perspectives on Advanced Development / An Effective Economy, No. 1. - 2018.

way to improve the situation is to spread the Internet to the general public and to provide mobile operators with fast and quality content;

Table 1. Development of the digital economy of the world in 2019

Problematic			**Promising**		
The name of the country	Digital Economy in 2008-2019 (0-2%)	Assessing the Digital Economy (20-50%)	The name of the country	Digital Economy in 2008-2019 (2-4%)	Assessing the Digital Economy (20-50%)
Egypt	0,5	34	India	2,5	36
Pakistan	1,2	33	Morocco	2,6	42
Algeria	1,6	33	Vietnam	2,2	44
Peru	1,3	43	Mexico	2,7	44
Thailand	1,6	47	Russia	3,3	48
Greece	0,7	49	Jordan	2,2	48
South Africa	1,6	49	Kenya	3,4	39
Slow down			**Leaders**		
The name of the country	Digital Economy in 2008-2019 (0-2%)	Assessing the Digital Economy (50-80%)	The name of the country	Digital Economy in 2008-2019 (2-4%)	Assessing the Digital Economy (50-80%)
Hungary	2,4	52	China	3,9	49
Austria	2,5	65	UAE	3	65
Denmark	1,1	74	Singapore	2,3	73
Canada	1,5	67	England	2,2	72
USA	1,8	72	Hong Kong	2	72
Norway	1,8	77	Israel	2,1	62
South Korea	1,4	73	Estonia	2,1	65

Source: Compiled by authors based on [36]

2. *Prospective countries* are currently on a low level of digitalization (20-50%), but are developing rapidly. The main

[36] Digital evolution Index 2019, School named after Fletcher Tufts University

disadvantage of development in this group is the underdeveloped infrastructure and low level of institutional environment. Overcoming these problems, such countries can become promising for potential investors. This requires the creation of quality institutions that will help innovate.

3. *Slow down countries* have developed digital economies, but are losing their gains, is being in the digital plateau. These states need to thoroughly and consciously approach the rethinking of their economic model, encourage enterprises to digitize and eliminate any obstacles in this direction. The best way in this situation is to take the experience of the leading countries.

4. *Leader countries* have both high rates of digital economy and rapid dynamics of its development. They are constantly innovating and taking advantage of their position on the world stage. But it is worth noting that leadership is difficult to retain, which is why it is necessary to create new demand areas, to form a common culture of business structures and to support innovative development. Otherwise, such countries have a high likelihood of joining slow-moving countries.

Drawing on the findings of this study, it should be noted that as of today, Ukraine is more likely to be one of the most promising countries that can achieve the growing dynamic of digital impact on the country's GDP. This situation reaffirms the urgency of government stimulation and protection of initiatives in the digital sphere, and the structural transformation of the Ukrainian economy through innovation in ICT and digitization of various spheres.

Summing up, it is worth noting that one of the main aspects of successful and promising development of the digital economy is the support from the state, as well as the focus on specific features: identify and enhance the unique drivers of the dynamics of digital development in the country.

Business organizations that were the first to cope with such challenges, held and did not lose their positions, or even improved their own achievements, entered the world rankings. Such are the IT companies in the world, such as Amazon, Microsoft, eBay, Apple, Facebook and others. Their leadership positions are demonstrated by global digital economy development indices, in particular the Global

Innovation Index (INSEAD, WIPO), ICT Development Index (ITU), Global Competitiveness Index (WEF), Digital Economy and Society Index (DESI). At the same time, there are a number of unresolved issues for our country regarding overcoming the significant gap in the investigated issues (Table 2).

Table 2 - Priority for bridging the digital divide in Ukraine

Priority	Type of digital development	As of 2019	Goal 2030E
1	Infrastructure (solid infrastructure)	Coverage - 50%	100%
2	Infrastructure (soft infrastructure)	Absorption - 10%	95%
3	Financial availability of technologies in terms of their cost to the end consumer	The level of spending on IT to GDP per year is only $ 53	1 000 $
4	Competent	35% of citizens have a basic level of digital skills	90%

Source: [37]

Shown in table. 2 priorities in bridging the digital divide in Ukraine indicate that there is a lack of both state policy and an understanding of such transformations in society and the financial capacity to implement them. However, scientists of the Ukrainian Institute of the Future have determined that the digital transformation in Ukraine has a number of important elements (Fig. 1), the first of which will allow to increase productivity and efficiency of economy and business.

From the presented transformation processes Fig. 1 it can be concluded that such sectors as energy, mechanical engineering, agriculture, health, education, public administration, services, retail,

[37]Ukraine 2030E is a digital economy. - Ukrainian Institute of the Future. - [Electronic resource] - Access mode: https: //strategy.uifuture.org/kraina-z-rozvinutoyu-cifrovoyu-ekonomikoyu.html.

transport and logistics will have the most significant impact. So, based on the experience of foreign leaders of digital transformation, analysts predict that the efficiency of these industries will be in the range of 90 to 1000%.

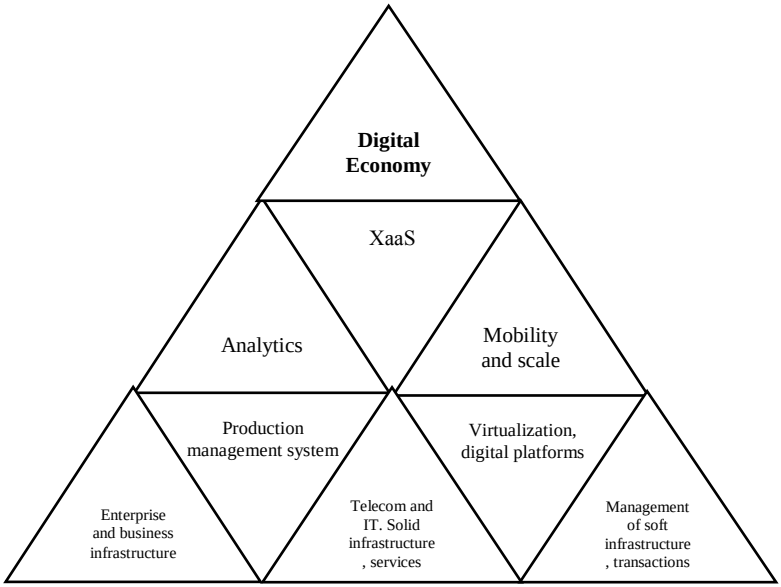

Figure 1. Elements of digital transformation in Ukraine
Source: [38]

Such a development within the new technological approach has its obvious advantages, but there are significant obstacles for Ukraine. In most cases, the inability and lack of desire to adapt to change has its roots in outdated management practices. Therefore, we believe it is appropriate to present, in our opinion, the most characteristic persuasive features (trends) of today's global digital landscape, given the management component of change. These include the following:

[38] Ukraine 2030E is a digital economy. - Ukrainian Institute of the Future. - [Electronic resource] - Access mode: https: //strategy.uifuture.org/kraina-z-rozvinutoyu-cifrovoyu-ekonomikoyu.html.

- *digital technologies are rapidly expanding*. So today, the number of mobile connections per day exceeds the size of the planet's population, and the number of interstate digital information flows has increased several times in the last ten years, accounting for about a third of world GDP every year. For most people, more and more opportunities are available to get information in a high-quality and fast way, which also has a downside - the chaos in information flows increases. This undoubtedly imprints on management features at any level of organizational structures. Nowadays, communication with the cell phone, the use of basic management functions (such as control and motivation) by means of personal communication and all kinds of applications becomes more and more relevant. Nowadays, submitting a project report or plan through digital media is commonplace, and every year, this trend is only gaining momentum;

- *the biggest players of the digital age have obvious power in the market.* Businesses such as Apple, Alphabet, Alibaba, Microsoft, Amazon and Facebook are among the richest in the world in terms of capitalization. Their success can be explained by the network effect, scaling and dominance of the market, which provides the necessary resources to implement innovative solutions, as well as by the power and influence on the pace of digital product distribution. The data of the companies on their own example show that management in the classical sense has long been ineffective and that the one who first of all creates an organic structure is winning now. And the heads of enterprises, by the established approach, are no longer just heads of companies, but leaders who "lead" subordinates;

- *digital technologies are changing future professions and fields of activity.* At the moment, the associated digitalization features such as production automation, large-scale data manipulation and artificial intelligence will lead to the disappearance of nearly a million professions, which will directly affect each country's economy. But on the other hand, this situation will lead to the emergence of new qualifications and the acquisition of necessary competences. We expect that the utilization of human potential will increase several times; therefore, quality managerial competence for

each company will be a necessary factor of existence in the market. It is important today and will continue to be popular with the so-called soft competencies of people. That is, abilities and specific skills ("solid" knowledge) remain important especially for specific industries, but also the ability to communicate, work in a team, think critically, deal constructively with conflicts, and so on also need due attention;

- *digital markets are not equal in content*. To create conditions for healthy competition in the markets, it is necessary to ensure the policy, legal norms and the appropriate level of economic development of the country. Currently, there are leaders and outsiders in the world of digital adoption. One of the reasons for this is the policy of states that deliberately block digital companies and do not allow the use of content in other countries. That is, one must be aware that quality management has its roots in the highest authorities. Accordingly, the main directions of the state development in the framework of successful application of modern governance transformations need rethinking.

In summary, it should be noted that the development of management systems in terms of digitization should occur when executing a number of management decisions.

First, perfect planning for the company's digital strategy, bringing together existing initiatives that have a positive effect in the short and long term. Assessing the feasibility of implementing digital initiatives, identifying the likelihood of new risks or opportunities from implementing digitization.

Secondly, constant monitoring of trends in the industry and determining the conditions for the company to adapt to changes. Taking into account the rapidly changing conditions of the market environment, tracking new technologies in other industries, finding out their impact on their own businesses.

Third, identifying and evaluating constraints, finding ways to make progress, taking into account existing complications and contradictions. Industry specificity may require additional conditions for infrastructure support, increased security, and the like.

Fourth, redistribution of profit centres, forecasting and diagnostics of development of own branch, related and others becomes the basis of effective management decisions. The modern management system should be based on a comprehensive analysis of data, their application, the formation of new information knowledge.

Fifth, finding a balance between an innovative and pragmatic vision of development. Predicting the expected effect of digitization, comparing innovative initiatives. The main task of management is to evaluate the possible effect, filter and select priorities for the development of the company.

Given the above, it should be noted that the main direction of development of management systems in terms of digitization should be: promoting the acceleration of innovation, predictive monitoring of the market environment, assessment of factors affecting the competitiveness of the company, development of directions based on industry priorities and customer experience. At the same time, there should also be formation of human resources, complex synchronization of all activities, and development of culture and competences of information exchange.

These and other areas of digital transformation in the business environment require some substantial research that may be the subject of our future searches.

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DIGITAL TECHNOLOGIES INFLUENCE ON BUSINESS ORGANIZATION MANAGEMENT

Shatilova Olena

Today, it is almost impossible to imagine a functioning business organization without the use of modern technologies such as computer or telecommunications devices. On the one hand, business development is dependent on digital technologies, but on the other hand, digital technologies create business opportunities. Accordingly, it can be argued that modern digital technologies correlate with changes in the effectiveness of business organization management and transform the managerial process.

Leading researchers in a field of management, such as Drucker, Dyson, Gendy, Saffo, and Sange, have argued that in the 21st century the main challenge for leaders is not only the technological revolution, but also the management of an organization's resources. Managers must understand that changes in technology will not only improve the quality of information about certain processes in the organization, but will also have a great impact on its overall effectiveness, so the use of information, telecommunication and digital technologies, as well as the company's ability to adapt to a competitive environment with its constant development are some of the key factors of success in the context of digital transformation[39].

Digital transformation is the process of using digital technologies to create new or modify existing business processes or consumer experiences for effective operation in a changing market and business requirements[40]. It is a cultural, organizational and operational change of an organization, industry or ecosystem through an intelligent integration of digital technologies, processes and competencies at all levels and functions in several stages. Digital

[39]Aaron Ayeta M. Impact of ICT on human resource management. ACADEMIA. 2019. https://www.academia.edu/12682490/IMPACT_OF_ICT_ON_HUMAN_RESOURCE_MANAGEMENT

[40] What Is Digital Transformation? Salesforce. https://www.salesforce.com/products/platform/what-is-digital-transformation/

transformation uses technologies to create value for different stakeholders (customers in the broadest sense) through the process of innovation and gaining opportunities for rapid adaptation to changing market conditions.

Despite the fact that the term "digital transformation" is most often used in the context of business organizations, this process is inherent in other organizations, in particular - the government. A clear example of how digital transformation affects virtually all aspects of life is Japan, where the Society 5.0 initiative has been launched, which is to some extent an analogy of the Industry 4.0 transformation vision designed for society as a whole[41]. Given the societal significance and origins of digital transformation, it is important to understand the fact that it affects the business organization not only internally, through the transformational changes implemented by management, but also externally - by society, government and digital trends that set new requirements and standards for a work process, communication processes, coordination, etc. This phenomenon also determines the essence of the impact of digital transformation on management. Management as a process that includes all aspects of a business organization is much more vulnerable to stimuli from both its external and internal environment and, therefore, must be much more flexible in its actions to maintain control over the organization and compliance with competitive conditions of the environment in which it is located.

The main areas of digital transformation influence are the following: digital transformation of society, digital transformation of business environment, digital transformation of employees, digital transformation of management, digital transformation of operating activities (Table 1). Together, these areas fully describe the process of modern digital transformation.

Digital transformation influence on business organization activity can be viewed from three main sides - digitization of employees, digitization of business processes and digitization of management. All of them are highly interconnected, since they create

[41] Digital transformation: online guide to digital business transformation. i-Scoop. https://www.i-scoop.eu/digital-transformation/

a basis for business organization management's digital transformation[42].

Table 1 - Areas of digital transformation influence

Areas of influence	Description
Digital transformation of society	Wide spreading of digital technologies in everyday life, in particular - information and communication technologies (social networks, messengers), widespread use of the Internet, in particular - mobile 3G, 4G, 5G networks
Digital transformation of business environment	The transition from analog to digital communication mechanisms between business organizations, the use of digital analytical tools for business activities, in particular - to determine market strategy, behavioral strategy and communication with competitors.
Digital transformation of employees	Formation of a number of behavioural features, requests, needs of employees related to the use of digital technologies, aimed at improving efficiency, simplifying routine tasks, providing personal communication needs. These phenomena are closely related to the "digital transformation of society" described above, as this process gives employees a set of expectations that business organization cannot always meet due to a number of internal or external obstacles.
Digital transformation of management	A comprehensive use of digital tools in management at all its stages, in particular - in the processes of operational and strategic planning, organizational design, motivation, control, performance management.
Digital transformation of operating activities	Use of digital tools in the implementation of direct operational activities of a business organization, sales of its products, interactions with consumers and customers, etc.

Source: Formed by author

[42] Strohmeier, D. HRM in the digital age – digital changes and challenges of the HR profession. Employee Relations. 2014. No 36(4).

The concept of "digitization of workers" as a category is quite common in the modern research literature, but no consensus has been reached on its single essence. Quite often, when mentioning this issue, scientists and researchers in the field of management use quite specific concepts, such as "digital natives"[43], "digital millennials"[44] and "digital generation"[45].

In essence, they are all aimed at explaining a new type of worker, a workforce that has been formed in the new digital age. A typical representative of this relatively new cohort of employees has a special set of characteristics, needs, skills, worldviews and types of behavior that shape both his role in the organization as a whole and his relationships with colleagues and management. In particular, one of the important examples of such differentiation of "digitalized workers" from their classic type are completely different, higher requirements for receiving and absorbing information, as well as the ability to provide their own feedback using modern digital communication sources.

The impact of digital transformation has also affected business leaders. In particular, the requirements for potential employees have been significantly changed when hiring. If earlier the main indicators were the presence of technical skills in a given field, the ability to quickly complete the required tasks, high levels of discipline and responsibility for their own actions, in modern times these characteristics have been changed, adding such competencies as a so-called "digital literacy", i.e. ability to work quickly and efficiently with the information technology base used in the process of work, the possibility of multitasking, the ability to communicate quickly and efficiently through digital communication channels. Quite a lot of emphasis is placed on the ability to quickly search for information with its further processing for the purposes required by the

[43] Prensky, M. Digital natives, digital immigrants. On the Horizon. 2001. No 9(5), pp. 1-6.

[44] Deal, J.J., Altman, D.G., Rogelberg, S.G. Millennials at work: what we know and what we need to do (if anything). Journal of Business and Psychology. 2010. No 25(2), pp. 191-199.

[45]Tapscott, D. Grown up Digital: How the Net Generation is Changing Your World. HC, McGraw-Hill. 2008.

organization, while the requirements for a wide knowledge base are significantly reduced due to their availability "on demand".

The concept of "digitization of business processes" is closely related to the concept of "digitization of employees". Most of the work in any modern organization is related to obtaining, processing or analyzing information. At the same time, almost all information in the modern world can be described as digital, formerly digital or the one that could be digital[46]. In fact, the use of digital technologies in many areas has long ceased to be part of the work, and became the work itself, because it directly affects each of its elements.

"Digitization of management" of business organizations refers to their use of digital technologies in the processes of direct planning, organization, motivation, control of their activities, as well as communication using digital technologies at such levels as "management-management", "management-staff" and "staff- staff "at all stages of the managerial cycle to achieve the goals of the business organization. In essence, the digital transformation has given business leaders some unprecedented communication and control mechanisms that have enabled them to monitor the activities of virtually the entire organization in real time, including identifying bottlenecks and effectively addressing them.

One of the most important challenges of "digitization of management" is the streamlining of communication links in a business organization, which can be somewhat chaotic due to their availability at any time on demand, as well as eliminating the "digital divide" - a phenomenon arising from differences in digital competencies both between different specific employees of the organization and between its entire units, which can significantly slow down the organization. The first problem can be effectively solved by using classic management methods, while the second problem requires more comprehensive measures, such as creating opportunities for employees to learn how to work in a digital transformation era, or changing the business organization's recruitment policy with a focus on their digital literacy.

[46]Bawden, D. Origins and concepts of digital literacy. Digital Literacies: Concepts, Policies and Practices. 2008. pp. 17-32.

The main elements of the implementation of digital tools in the management of a business organization are tools and systems, capabilities, activities, field of view and experience (Table 2).

Table 2 - Elements of digital tools implementation in a management activity of a business organization

Elements	Description
Opportunities	A direct usage of digitally obtained information by the employees and the ways of implementing digital communication into employee's workflow.
Activities	A routine multitude of digital cooperation, which includes everything from employee's clicks and choices in select programs to actual business processes.
Field of view	A digital space that provides employee with necessary information and competencies.
Experience	Location of complex, intuitive and productive elements in interaction with digital instruments.
Tools and systems	IT components of workplace digitization.

Source: Formed by author based on[47]

Ensuring a successful use of digital technologies both in the management of an organization and in its daily activities in practice is both simpler and more complex than it seems at a first glance.

There are a couple of measures that can radically improve "digital wellbeing" in business organization management, including but not limited to the ability to work remotely, encouraging employees to work with their own devices, developing mobile applications to solve problems that arise on a regular basis, creating mechanisms of instant communication between employees and managers, creating mechanisms of providing employee feedback (especially – anonymously), accelerating the process of solving different problems directly related to digital support of organization's employees, including software installation, maintenance of the devices in use, etc.

47 Robertson J. What is digital employee experience. Step Two. 2020. https://www.steptwo.com.au/papers/what-is-digital-employee-experience/

Despite the relative simplicity of all the steps described above, business organizations quite often face significant problems in their implementation. The main factors preventing "digital well-being" in business organizations are ignorance of managerial personnel, excessive conservatism and bureaucracy, the presence of technological gaps, as well as lack of resources (Table 3).

Table 3 – Preventing factors of the development of business organization's "digital well-being"

Factor	Description
Ignorance of managerial personnel	Lack of understanding of the importance of implementing a balanced policy for the implementation of digital tools in the management and operation of a business organization.
Excessive conservatism	Reluctance to introduce new approaches to solving classic organizational problems.
Excessive bureaucracy	Bureaucratization of communication systems and subsystems in the organization, which does not allow the effective communication and cooperation between its various departments. For example, the requirement of a large amount of paperwork to fill out when installing software for each individual employee, which is typical for large business organizations, especially - holdings.
"Technological gap"	There is a significant difference in digital skills between employees or groups of employees. It often occurs due to age and functional characteristics. For example, the younger generation, or IT staff, are more likely to use digital technologies effectively.
Lack of resources	Lack of possibility to implement the provision of an effective digital environment due to objective reasons. For example, a lack of funding, a lack of access to suppliers of equipment and devices.

Source: Formed by author

Quite often there are several of the above obstacles in business organizations, which further complicate the implementation of digital technologies in the management of a business organization. In particular, this problem is inherent in large business organizations

with a conservative style of management, which have long existed. Organizations in which long cycles of renewal of fixed assets and stable technologies of production or activity (in particular - enterprises in the food industry) are present are particularly vulnerable to this problem.

It is important to understand the impact of digital transformation on the management of business processes occurring in the organization directly. The digitization of business processes in management is aimed at improving the way companies conduct cross-functional work, and provides opportunities for the whole company to effectively manage the entire life cycle of business processes[48].

In recent decades, business process management has had a strong focus on digitization, which was characterized by the analysis and solution of various problems related to the activities of the organization. As a result, wealth of knowledge and techniques have emerged, such as Lean Management, Six Sigma, or Workflow Management.

The main types of digital business processes are integration business processes, business processes related to human activities, business processes related to decision-making and business processes related to documentation (Table 4).

Digitization of business processes helps to increase the efficiency of business organization management and creates a new paradigm of management. Given the factors described above, it can be argued that the use of digital tools and technologies in management has a significant impact at all stages of the so-called "managerial cycle" - planning, organization, motivation and control.

Planning. It is advisable to start the analysis of the impact of digitization on business management from the first stage of the management cycle - planning. In general, it is impossible to say unequivocally that planning has changed greatly with the transition to a new digital era. In fact, the planning process has undergone minor changes, in particular in the types of planning tools used.

[48]vom Brocke J, Rosemann M. Handbook on Business Process Management 1: Introduction, Methods, and Information Systems. Springer. 2015.

Table 4 - Description of digital business processes

Business processes	Description
Integration business processes	A major focus on automatization of processes that integrate systems and applications. A limitation of employee role in integrational processes. Usage of externally oriented processes.
Business processes related to human activities	Automatization of consumer service activities. Call center management. Other processes with a degree of human communication.
Business processes related to decision-making	A focus on a usage of digital information sources by the employees, especially when making critical decisions and operating in a changing and dynamic environment.
Business processes related to documentation	A focus on a quick processing of documents in a digital format, which ensures a more rapid transition of documents to their finished form.

Source: Formed by author based on[49]

However, the biggest impact of digitization on planning is the technology of developing plans that directly relate to the digital transformation of business organizations. These types of "digital planning" (often called "digital transformation strategies") not only give business organizations an idea of the future implementation of certain technologies in both management and information processes, but also, in modern conditions, set the tone to the whole process of business organization development.

Digital transformation strategies (DTS) are a central concept for coordinating, setting priorities and implementing the digital transformation of a business organization[50]. They have a holistic focus, and although they intersect with other strategies within the

[49] Matt, C., Hess, T., Benlian, A. Photography Revolution. Journal of Strategic Information Systems. 2015. No 18(1), pp. 46-55. (2015).

business organization, they often align with existing functional strategies. In contrast to the prevailing understanding of digital transformation strategy as a functional level strategy that must be aligned with a business strategy for digital business management transformation, the digital transformation strategy reflects the overall change needed in order to use digital technology in business management. The concept of digital transformation strategy promotes a new idea of digital business strategy, which is sometimes perceived as a fusion between the organizations' IT strategy and its business strategy[51]. Although digital business strategies go beyond a technology-oriented view of different concepts of IT as well as information systems[52] [53], they also include concepts of business opportunities arising from the application of digital technologies in management. The digital transformation strategy focuses on measures aimed at achieving the desired future state of digital transformation by the business organization. Business organizations that implement a strategy of digital transformation increase their efficiency. Digital transformation helps streamline communication, improve collaboration and shift the focus from the project implementation process to strategy and results.

Organization. The transformation of the "organization" function under the influence of digital technologies is mainly associated with improving communication between employees and teams, expanding cooperation in teams, increasing the focus on results rather than the process of achieving them, as well as increasing amounts of analytical information to improve organizational design processes.

Traditional communication tools such as e-mail are inflexible, because they are not designed to communicate in real time. Often, important information is lost in the accumulation of correspondence

[51]Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., Venkatraman, N. V. Digital Business Strategy: Toward a Next Generation of Insights. MIS Quarterly, 2013. No 37(2), pp. 471-482.

[52]Mocker, M., Preston, D. S., Teubner, A. Information Systems Strategy: Reconceptualization, Measurement, and Implications. MIS Quarterly. 2010. No 34(2), p. 233.

[53]Teubner, R. A. Information Systems Strategy. Business & Information Systems Engineering. 2013. No 5(4), pp. 243-257.

chains, which seriously affects productivity. At the same time, collaborative work management software allows employees to communicate and interact in real time, significantly saving time resource.

In addition to simply improving the effectiveness of internal communication, these tools also increase the effectiveness of employees. When team members are relieved of the obligation to filter hundreds of emails a day just to keep up with the progress of the project, they have the opportunity to spend more time developing and discussing project strategies - exactly what the immediate focus should be on attention for its success.

Along with facilitating more effective, strategy-oriented communication, modern work management technologies enable teams to collaborate truly effectively. With the appropriate platform, managers, project managers and team members can add comments, assign tasks, organize deadlines, inspect and approve assets, and manage almost everything else related to the project in one convenient application. This deep level of cooperation inevitably strengthens the sense of shared responsibility of teammates and contributes to the formation of a cooperative, synergistic environment. A study by Wrike[54] found that workers who saw themselves as active collaborators were more involved, less prone to exhaustion, and more successful than those who were more isolated from teammates. The same study showed that workers in such an environment performed their work effectively 64% longer.

Digital transformation automates workflows and coordinates traditional organizational design tasks, giving managers more time to focus on strategy optimization and project implementation. With more digital and process automation tools at their disposal, managers offer the best ways to align each project with their business strategies and goals - and deliver better results in the process.

Digital transformation provides managers with analytical technology for data-driven decision-making, analysis of models and

[54]McAbee J. 4 Ways Digital Transformation Is Changing Project Management. Wrike. 2019. https://www.wrike.com/blog/digital-transformation-changing-project-management/

trends, and ultimately increases project effectiveness and efficiency. Such access to this type of data also helps executives and managers make more informed decisions faster and easier than without the use of digital technology. Reliable analytical reporting helps managers track projects and track budgets using real-time cost-benefit analysis. In-depth datasets can also be easily explained to stakeholders and managers, giving them an accurate picture of the situation and helping them to plan future initiatives and make critical strategic decisions.

Motivation. Speaking of the relationship between employees and management, we must mention an important stage of the managerial cycle - motivation. From the management's point of view, the motivation of employees is carried out in such way that their behavior brings the greatest benefit to the organization. In this aspect, digital technologies play an extremely important role, as they can be used to create and develop a variety of cognitive skills, as digital technologies include the ability to absorb large amounts of information that teaches people how to develop skills and how to think and act systemically[55].

Business organizations must provide the right incentives and a motivating work environment to promote the optimal diffusion of information and knowledge, which in turn should lead to increased productivity.

To study the impact of digital technology on employee motivation, the University of Rennes in Luxembourg conducted a research in 2011[56]. To determine the correlation between the use of digital technologies and motivation, researchers used comprehensive data from the European Social Survey. The research results emphasize the positive impact of digital technologies and innovative labor practices on the productivity of people and productive resources. The results of the use of digital technologies to motivate employees show that by enabling the use of digital technologies in

[55]Strohmeier, S. Employee relationship management: Realizing competitive advantage through information technology?. Human Resource Management Review. 2013. Vol. 23.

[56]Ludivine M. The effects of ICT use on employee's motivations: an empirical evaluation. CEPS/INSTEAD, Luxembourg and Rennes. 2011. P. 14.

the workplace, the organization creates an enriching work environment that has a positive effect on the net internal motivation of employees. It has also been found that virtualization of contacts using digital technology instead of personal communication reduces the development of team spirit between employees, but the magnitude of this effect is less important than the magnitude of a positive connection with the need for team recognition[16].

Control. The introduction of digital technologies contributes to the creation of new, more advanced mechanisms for managing employee performance, eliminating the complexity, inaccuracy and opacity of classical methods of employee control, creating an atmosphere of interactivity and goal orientation, which helps increase employee productivity. Digital technologies provide easy access to information about the activities of employees, which allows managers to analyze, evaluate the effectiveness of their activities and adjust their set of tasks.

One of the ways to implement digital technologies in the management of the organization is to manage employee productivity, which refers to the process of control in the management cycle. Traditional methods of monitoring employee performance are quite time consuming, inaccurate and opaque. A performance review for most companies is an annual obligation when employees sit with their supervisors and try to demonstrate the maximum amount of their competencies, backed up by some dubious evidence that is quite difficult to substantiate.

Traditional performance monitoring frustrates and burdens employees and is quite difficult for managers. Managers have criteria (and perhaps a quota for each performance appraisal), and employees often do not know how to justify their contribution to the business. Such control usually results in a normalized review, which often does not satisfy employees, creating a list of goals they must meet for the next year to improve their current assessments, which they have a high chance of forgetting in a short period.

One way to solve this problem is to use elements of a "digital workplace" in performance appraisals. The digital workplace positively differs from traditional methods in its form, as it is interactive, goal-oriented, and conducive to recording and storing

information. It allows for a continuous, fixed assessment of employee contributions, denying the need for manual collection of information. It also supports the focus of employees on achieving maximum results by providing the means to control their own work.

Project management tools allow employees to work remotely, flexibly and securely through simple tools such as a regular web browser. Some tools allow users to store all digital workstations on a single portal, providing features such as to-do lists, bulletin boards, graphs, file storage, chat, and progress reports.

Performance appraisal software provides clear evidence of individual contributions, regardless of whether the employee accesses the workplace remotely or on site. By providing direct access to each employee's work, these systems facilitate communication so that each employee stays in touch and provides real-time feedback on performance. This system also allows employees to monitor their progress and determine the shortest path to productivity.

The digital workplace not only provides flexibility, but also benefits employee's focus and collaboration. The digital workplace, from interactive displays to virtual messaging and performance management software, makes workstations accessible, flexible and productive. Such mechanisms are quite useful for management; because thanks to them information about the activities of their organization is available at any time on demand for evaluation and analysis in a format convenient for them[57].

It is worth noting that despite the fact that the digital workplace in this study is considered mainly in terms of the control function, this tool, like all others, has a comprehensive impact on planning, organization, and motivation.

Equally important for understanding the impact of digital transformation on the management of business organizations are the tools that are directly used to carry out certain management tasks. Most of them have already been mentioned above when considering

[57]Harris-Briggs N. How the Digital Workplace of 2019 Will Affect Performance Management. Training Industry. 2019. https://trainingindustry.com/blog/performance-management/how-the-digital-workplace-of-2019-will-affect-performance-management/

the impact of digital technologies in general on the management cycle. Among the main digital tools implemented in the management of modern business-organizations are such as digital workplace, digital communication tools, digital document management, digital tools for the accumulation and analysis of information about the activities of the business organization (Table 5).

Table 5 – Digital instruments of business organization management

Digital instruments	Description
Digital workplace	Provides such improvements as an independence from the physical location of employees, flexibility of work, a healthier work-life balance, which has a positive impact on employees' attitude to work and their efficiency.
Digital communication tools	Provide a process of streamlining most of the organizational processes and increase employee productivity; allow employees to communicate effectively, receive information and feedback immediately, and solve problems instantly.
Digital document management	Help business organizations to have easier and faster on-demand access to the necessary documentation, as well as ensure the storage of large amounts of information that can be further used for planning processes.
Digital tools for the accumulation and analysis of information about the activities of the business organization	Provide managers with an information about the activities of the business organization, which is available at any time. It is usually stored for a certain period and can be effectively analyzed and obtained without interfering with the activities of employees.

Source: Formed by author

The introduction of digital tools in the management of a business organization significantly affects its performance, provides the business organization with large amounts of analytical information that can be used at all stages of the managerial cycle and

transforms the relationship between employees and management by creating more favorable conditions for communication and feedback. Such changes should have a positive impact on the efficiency of both individual employees and the business organization as a whole.

The process of digital transformation has seriously affected the management activities of business organizations not only abroad but also in Ukraine, but in the context of domestic business, this phenomenon has acquired its own specificity. Domestic business organizations often face such challenges as the obsolescence of managerial approaches, the refusal to introduce digital technologies in the management and operational process, the instability of the political and economic environment, which makes it impossible to focus on reorganizing the management structure etc. Often an important factor inhibiting digitalization in the management of business organizations is the mismatch in views and expectations between objects and subjects of management and, as a consequence, the "digital divide" or the “digital gap” in the information subsystem of management. To address this problem, the management of organizations needs to clearly articulate their vision and strategy for the implementation of digital technologies, as well as learn about the views of their subordinates on this issue, through which there should be an adjusted further action plan for digitalization.

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DIGITAL TRANSFORMATION OF OPERATING MODELS OF BUSINESS ORGANIZATIONS UNDER THE INFLUENCE OF MODERN TECHNOLOGICAL TRENDS

Osokina Alla

A priori today is the statement that maintaining the leadership position of modern enterprises in the post-industrial conditions of economic development is possible only on the basis of digital transformation of their operating and business models. These transformations are based on the concepts of Industry 4.0, Smart Manufacturing, Internet of Manufacturing, Digital Manufacturing, and others. Despite the diversity of the above-mentioned concepts, they are all combined with a single purpose of ensuring the permanent achievement of the desired economic results of business organizations' activities through modern technological trends, which create fundamentally new preconditions for creating and offering consumer value.

The relevance of the research is the critical digital divide between foreign and domestic enterprises, which threatens the latter not only losing competitive positions, but also with the risk of weakening their economic stability.

Despite the short period of actualization of the researched issue of digital transformations of operating models under the influence of modern technological trends, the number of publications on this subject is increasing rapidly. Thus, C. Perez[58] notes that modern technological developments fundamentally change the logic of achieving competitive advantages of an enterprise. Salim Ismail, Yuri van Geest and others emphasize that the digital transformation of the operating models stimulates the emergence of new players in the market and increases their flexibility[59].

[58] Перес К. (2011) Технологические революции и финансовый капитал: динамика пузырей и периодов процветания. – М.: Дело.

[59] Salim Ismail, Michael S. Malone, Yuri van Geest (2014) Exponential Organizations: Why new organizations are ten times better, faster, and cheaper than yours (and what to do about it) – A Singularity University Book.

The systematization of approaches to understanding the essence of digital transformation of operating models of enterprises (DTOME) makes it possible to highlight the following substantive emphases:

1) the scale of technology implementation: for example, *Boston Consulting Group* analysts define DTOME as the maximum use of the potential of modern technological trends in all aspects of business activity[60];
2) the scale of changes that follows in Howard King's definition of DTOME as a large-scale transformation of operating activity that affects all value chain processes and impacts not only on the operating model change, but also on the infrastructure of the enterprise[61];
3) the resulting constructive changes of the operating models influenced by modern technological trends: for example, scientists from the Massachusetts Institute of Technology and experts from the Global Center for Digital Business Transformation identify DTOME as a key factor in increasing enterprise productivity[62];
4) The creative changes in top management performance: according to D. Terrar, DTOME is the process of the organization's transition to new ways of thinking, management style based on the use of mobile and other digital technologies to fully satisfy the interests of customers, suppliers and partners[63].

[60] Банке Барт Аналитический отчет BCG. [Электронный ресурс]. URL: https:// vlast.kz/corporation/24539-cifrovizacia-biznesa.html.

[61] Вьюгина Д.М. (2016) Цифровые стратегии медиабизнеса в условиях изменяющегося медиапотребления // Медиаскоп. – № 4. [Электронный ресурс]. URL:http://www.mediascope.ru/2233.

[62] Отчет Глобального центра по цифровой трансформации бизнеса (2015): Digital Vortex. How Digital Disruption Is Redefining Industries. Отчет Массачусецкого технологического института (2011): Digital Transformation: A Roadmap For Billion-Dollar Organizations.

[63] Terrar David What is Digital Transformation? Theagileelephant.com. [Электронный ресурс]. URL: http://www.theagileelephant.com/what-is-digital-transformation.

Generalizing the current state of scientific developments in the researched problem, in the digital transformation of the operating models, the author understands the management-initiated mental-cognitive process of fundamental operating processes improvement through the continuous introduction of digital technologies, which provides the desired long-term results for the organization.

It is the constant development of breakthrough technologies that determines the continuity of the DTOME process. It aims to create stable competitive advantages and a loyal network of stakeholders. And the technologies in these changes are only part of the success. The development of the company in the direction of intellectual organization, deepening the creativity in top management actions and ways of making management decisions are of paramount importance. Experts of the Digital Transformation Institute (*DTI*) consider the team approach to attracting staff in digital transformation, training in digital tools, and formation of modern corporate culture to be one of the main stages of DTOME.

Traditional operating models are static in nature and oriented towards slow progressive development. The rapid response to dynamic changes in the business environment in such a model is constrained by numerous barriers inherent in the very nature of this model:

- formalized processes, regulations and instructions, hierarchical management system, significant resource costs for internal control;
- complexity and inflexibility of traditional automated corporate systems;
- the established practice of innovation and change management, which is mainly grounded in the project methodology based on PMBoK (Project Management Body of Knowledge), which provides a clear fixation of technical tasks and numerous approvals.

Modern technological trends in digital technologies development are opening up new opportunities and offering new tools of artificial barriers of traditional business models. Digital initiatives are now rapidly expanding around the world in businesses of various economic activities. The World Economic Forum estimates that digitalization has a great potential for business and can

provide additional $ 30 trillion revenue for the world economy by 2025. Despite the large-scale trend of digital transformations in the global space, unfortunately, these necessary changes are extremely slow in the post-Soviet space. This determines the objective need for further scientific developments in this direction, as well as their operational and practical implementation.

The author of the article shares V. Ryzhkov's views that the driver of the DTOME is a modern consumer and a change of communication culture[64]. But he believes that digital technology should be used to interact with all stakeholders, not just consumers, but suppliers in particular. Accordingly, DTOME should be based on a personalized approach, and modern technological trends create the preconditions for its implementation on the basis of four key technologies: cloud computing, artificial intelligence, big data, mobile applications (Fig. 1). Cloud technologies create prerequisites for business scaling, artificial intelligence — for interconnections identification; data analytics — for storing and processing a large array of multi-vector data, mobile applications — for improving the convenience of stakeholders and optimizing communications with them.

The synergistic effect of the above-mentioned technologies ensures an extremely important transition from multichannel to omnichannel[65], which integrates different communication channels into a single permanent system: virtual / voice assistants, smartphones, chatbots, smart things, smart offices, websites, social networks, contact centers.

In addition to communication channels, it is an important information value to format the experience of stakeholder interaction based on the following components:

- establishing an emotional connection through an individual approach - personalization;

[64] Рыжков В. Что такое digital-трансформация? Komanda-a.pro. [Электронный ресурс]. URL: http://komanda-a.pro/blog/digital-transformation.

[65] «*omni*» - це збірна форма зі значенням «все»; «омніканальність» інтегроване сприйняття стейхолдерами інформації про підприємство, його продукти / послуги за допомогою використання всіх каналів

- understanding the needs and personal circumstances of the stakeholder - empathy;
- minimizing the costs of the stakeholders - saving partner's resources;
- transformation of negative stakeholder's experience into positive - conflict management;
- the level of satisfaction of stakeholders with partnerships - meeting expectations;
- formation of stakeholders' trust to the enterprise - good faith.

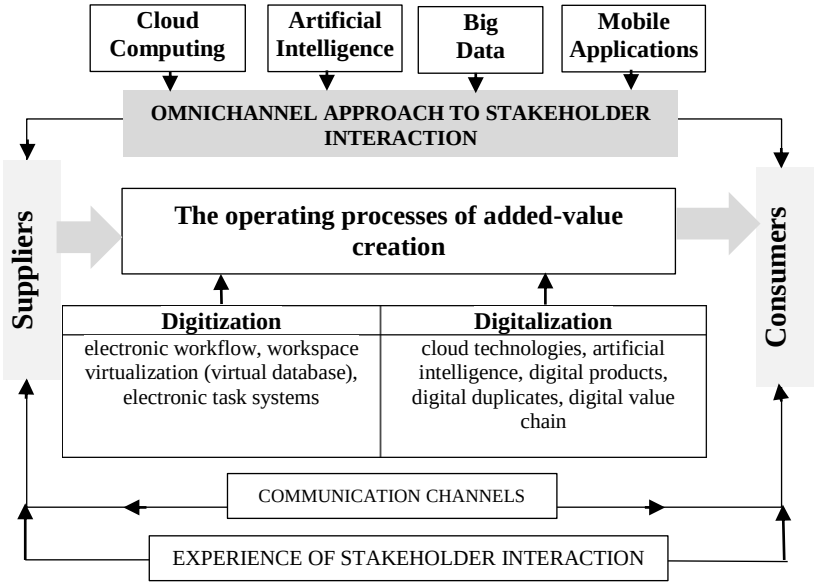

Figure 1. Logic and key elements of the digital transformation of the business operating model

Source: author formed

It is through the omnichannel that a continuous connection between communication channels and stakeholder interaction experience is ensured. In view of the above, it can be stated that omnichannel eliminates the disadvantages of multichannel, which uses different channels, but in isolation and separately. The preservation and processing of information about interaction with the

stakeholders allows to increase the level of its personalization and to form a stable loyal base of stakeholders.

The omnichannel approach creates the prerequisites for the large-scale use of the tool for interaction with stakeholders as crowdsourcing. This makes it possible to mobilize the resource of the relationship in order to achieve the desired results of the enterprise's activities[66]. Crowdsourcing allows increasing the level of products / services consumer value of the enterprise by attracting customers in in product development, generation of marketing ideas. Digital technologies allow these actions to be implemented through social networks and other modern communication channels. This practice in European Union enterprises has already proved the suitability of involving customers in the development of goods and services. In addition, this approach reduces operating risk in the dynamic and unpredictable conditions of the external business environment. Regarding the interaction with suppliers, we note that in terms of DTOME it is advisable to build it on the basis of unified technological platforms, which creates conditions for the joint growth of companies and the formation of stable relationships. Blockchain and smart contracts are among the priority instruments.

In addition to the interaction with stakeholders, the DTOME also provides for the digitalization of value-added operating processes. It is worth noting that today in Ukraine there is a misconception about the digital transformation as the transfer of document flow and other routine operations online. In fact, these are examples of simple digitization, rather than digital transformation, which does not exclude digitization, but focuses on the priority of the digitalization of operating processes.

To eliminate terminological inconsistency, it is advisable to specify the essential meaning of the concepts of "digitization" and "digitalization". The first concept reflects the processes of transferring individual data, functions, tasks into an electronic format. Improving the effectiveness of operating processes of

[66] Чижов С.Ф. (2015) Краудсорсинг в управлении проектами и российские реалии его применения. Белгородский экономический вестник. № 3(79). С. 95.

consumer value creating and offering involves the application of the following digitization components:

- Conversion to the electronic format of routine document processes using electronic signature capabilities;
- Electronic task-setting systems based on the integration of statistical information, enabling management actions to be optimized by synthesizing data from various management objects and identifying the best management practices for their replication;
- The virtualization of the workspace involves the grouping of all operational data in virtual databases, which makes it possible to integrate individual tasks for employees into a single format of a collective task, that informs each participant of the process about the work results.

Instead, digitalization processes form a fundamentally new level of information support for the operating processes of obtaining added value. Among digital tools of digitalization, it is advisable to focus on cloud technologies that allow transfering local, traditional ERP-systems into a cloud structure. It is worth mentioning that with the advent of the cloud technologies, they were not able to ensure the implementation of this solution, but their development creates new opportunities for increasing the operating sophistication of the enterprise on the basis of digital technologies. Thus, the ERP-system based on a cloud structure has a greater functionality and requires lower costs compared to local counterparts. In real time, it allows tracking of processes stages, logistics routes, etc. Already today, the experience of the world's leading companies proves that the transition to cloud ERP-systems saves costs by 25-50% compared to the local system.

One of the priority digital tools of the value-added operating processes is the introduction and development of ECM-system[67], which allows the processing of unstructured information based on artificial intelligence without human intervention. Thus, artificial

[67] *Enterprise content management* (*ECM*) – управління корпоративним контентом, а також його зберігання, обробка і трансляція в рамках організації. ECM-система - програмне забезпечення для управління корпоративним контентом

intelligence makes it possible to structure multivector information to form a statistical basis of the operating processes management. In general, *Gartner* analysts have identified ECM as a tool for supporting the life cycle of unstructured information of various formats and types based on artificial intelligence. The use of this tool allows solving two sets of issues: the digitalization of different databases and the digitalization of products' interaction, operating processes' and production lines'.

The creation of Digital Twins - digital copies of equipment, operating processes, value chain - is also important. The main advantages of digital analogues for business units are:

- reduction of production costs and introduction of its new types by digitalization of its prototypes;
- selection of alternative management solutions based on modeling of different situations and scenarios in a virtual environment;
- reduction in the time of placing a new product on the market on the basis of previous passing of the product's life cycle in the virtual environment;
- optimization of diagnostic service by selecting its options in advance on the basis of virtual simulation;
- remote control of digital copies and synthesis of information to gain relevant experience;
- maximization of the efficiency of routine operations and processes, which saves time and resources for the development of new and optimization of existing business areas;
- transformation of information into a key asset for the formation of sustainable competitive advantages.

It is worth emphasizing that the digital information of operating models should take place in a systematic manner, since the chaotic implementation of some elements of modern digital technological trends is unable to provide the desired results. Summarizing the global experience, there are two approaches to the implementation of the DTOME process.

The first approach can be characterized as «company - digital technologies». It presupposes the analysis of the enterprise's activity and identification of «bottlenecks» requiring immediate equalization.

This approach is characterized by rational criteria for evaluating the results of digital transformation in the current period and the inclusion of these processes in the company's strategic development plan.

According to the second approach, a range of priority digital technologies is selected firstly, which are more appropriate to begin the transformation of the enterprise's operating model. In this case, the company itself is considered as an object of the implementation of digital technologies. Accordingly, this approach is a sequence of actions according to the scheme "technology - company". The second approach is more appropriate to use with the advent of new modifications of digital technologies that have not yet proved themselves in practice. The algorithm for implementing a particular approach to digital transformation by alternative approaches is given in Table 1.

We believe that the "company-technology" approach is more appropriate in domestic realities. In this approach, the digital transformation of a business is seen as a priori element of a company's strategic management and a key tool for improving its performance efficiency. The technology-company approach should be applied with well-established digital operating models to test the latest practices and technologies.

In general, it should be noted that the enterprise's digital transformation of operating models has the following characteristics and advantages for the business entity:

- increases the level of transparency of processes both within the enterprise and in its relations with a wide range of stakeholders through the formation and processing of a large array of data;
- allows you to transfer all physical assets into an integrated digital system of value chains;
- raises the level of corporate culture and stimulates the development of digital literacy of employees and increase the level of their professional competencies;
- creates the prerequisites for structural changes not through the local introduction of innovative technologies, but through the logical integration of digital technologies in order to achieve the desired results of the company's activities;

- expands the possibilities of systematic assessment of consumer behavior on the basis of digitalization tools;

Table 1 - Stages of alternative digital transformation of the enterprise's operating model

<table>
<tr><th>Option 1: "enterprise - technology" approach</th><th>Option 2: "technology - enterprise" approach</th></tr>
<tr><td>Analysis of the existing operating model of the enterprise with the identification of "bottlenecks" of the value chain</td><td rowspan="2">Analysis of the best available technologies and opportunities for their implementation in practice</td></tr>
<tr><td>Diagnosis of possible ways to optimize the processes of the value chain</td></tr>
<tr><td>Research of existing technologies that contribute to solving the problem and avoiding unnecessary stages of value creation</td><td rowspan="2">Diagnosis of operational processes in order to implement the selected best available technologies</td></tr>
<tr><td>Determination of the economic feasibility of optimizing operating processes through the introduction of new technologies and the elimination of unnecessary stages</td><td rowspan="2">Determining the economic effect of the introduction of the best available technologies:
- for non-capital-intensive technologies: pilot project implementation;
- for capital-intensive technologies: calculation of the economic effect from using a new technology</td></tr>
<tr><td>Implementation and testing:
1) of new technologies; 2) of a simplified value chain in the pilot mode</td></tr>
<tr><td colspan="2">Analysis of the results of the digital transformation implementation phases, adjustments, gradual scaling</td></tr>
</table>

Source: author formed on the basis of[68]

[68] Chesbrough H. (2006) Open Innovation: The New Imperative for Creating and Profiting from Tech-nology. Harvard Business Press.
Mutaz M. Al-Debei, Ramzi El-Haddadeh, David Avison (2008) Defining the Business Model in the New World of Digital Business. Brunel University London, P. 7-8.
Rozeia Mustafa, H. Werthner (2011) Business Models and Business Strategy – Phenomenon of Explicitness. International Journal of Global Business & Competitiveness, January

- strengthening network interaction and partnerships, increasing conditions for joint activities and permanent exchange of knowledge;
- increasing the flexibility of operational processes to create added value, which expands the possibilities of their operational adjustment.

Summarizing the results of the research, note that modern business in the new digital world involves a complete rethinking of traditional operating models. Today, the digitalization of the enterprise is a catalyst for its development and a prerequisite for achieving sustainable competitive positions and desired target results in the industry market.

The logic of transformation of domestic enterprises` of operating models should be based on two key blocks: 1) digitalization of relationships with key stakeholders; 2) digitalization of the operating processes of adding value. The first block is aimed primarily at suppliers and consumers and involves the use of digital interaction channels and digital processing of stakeholder experiences as a prerequisite for objective management adjustments. The use of the tools of modern technological trends ensures the transition in partnership relations from multi-channel to omnichannel, which not only increases the informational value of interaction, but also contributes to building sustainable partner networks and client loyalty. The second block involves both the digitization of operational processes of value added and large-scale use of digital tools, which allows you to significantly optimize costs and ensure the efficiency of management decisions.

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CHAPTER 2. STRATEGIC IMPERATIVES OF THE INNOVATION MANAGEMENT

CONVERGENT ENTREPRENRURSHIP AND ITS IMPERATIVES

Kubiniy Natalya
Tizesh Pavlo
Latynin Kostiantyn

The complication of modern relations and increased competition at all levels of economic life necessitates the search for new forms and methods of interaction between the region and the entrepreneurship, which brings to life various forms of integration, entrepreneural organization and combination of business and territorial interests.

The importance of entrepreneurship as a specific activity is emphasized by Dorota Jelonek (2015), who declares the importance of entrepreneurship in general, argues that "entrepreneurship in organizations is understood to mean a way of starting and developing new plans that consists in the realization of innovation ideas from their inception to implementation. The implementation of ideas can be carried out by the organization itself, in cooperation with customers or with other organizations. Entrepreneurial organizations do not only respond to the symptoms that they notice in the business environment but they also stimulate new customer needs and development of new markets».[69] (p.1016).

[69] Dorota Jelonek. The Role of Open Innovations in the Development of e-Entrepreneurship International Conference on Communication, Management and Information Technology (ICCMIT 2015). Procedia Computer Science 65 (2015),1013 – 1022.

Any business operates in a specific regional environment, which causes constant interaction between the territorial economic system and business organization.

Convergent entrepreneurship is a type of economic activity within which the interests and intentions of the region and the business are joined, and it is realized in the form of a specific business, combines ecological, organic entrepreneurship with innovative.

The imperatives of convergent entrepreneurship are:

- the priinciples of dialectics,
- systymacity,
- the principle of strategic orientation.

The principles of dialectics contain a wide range of basic provisions, but in this context the main ones are the following:

- ensuring the coincidence of the logic of territory and
- business development and the principle of reconciling conflicts of interest.

It is worth noting that these principles intersect and mutually support each other, as evidenced by the following argument.

The logic of territorial development covers a wide range of positions, but in this study we will focus primarily on the rational use of available resources and the creation of those that will contribute to the principle of strategic direction. These resources include human and innovative potential that can create the conditions for the functioning of the region, which will be attractive for attracting highly skilled and intelligent workforce. Accordingly, converged entrepreneurship is also based on an innovative resource, which includes intellectual potential in a broad sense: both the human component and intangible intellectual property. It should be noted that in this case the principle of systemicity comes into force, when the human factor and intangible assets are elements of the development system.

The identity of the logic of territory and business development is realized through:

- creation of regional-corporate universities,
- regional system of innovative support of innovative business,

- financial support of innovation activity;
- introduction of modern regional crowdsourcing and crowdfunding platforms.

The principle of reconciling conflicts of interest requires first of all to determine the interests of the development of the territory and business, as well as to look at possible conflicts and ways to resolve them.

Bazilevich V. (2007) considers economic interest as a "conscious desire of economic entities to meet economic needs, which is an objective motivation for their economic activity."[70] (p. 48) It is also believed that the concept of "interests" does not exist separately. It is part of the triad of (2014) "values, interests and goals", namely: - in relation to the state - it is national values, national interests, national goals; - in relation to society - the values, interests and goals of society; - in relation to the person - values, interests and goals of the person."[71] (p.58)

Based on the above methodological messages, we consider the interest in this study as a focus on achieving a certain goal as a motivator of activity, which is established on cultural and economic values.

At the regional level, the interests are to form the competitive advantages of the territory, which in turn will act as an impetus for further development. The interests of convergent entrepreneurship, depending on the culture and economic preferences of the business, may include:

a) the creation of socially significant values for society;

b) the formation of profits as a source of future development.

In other words, the interests of a convergent entrepreneurship may be in the interests of the region, or be aimed at obtaining its own, high-level efficiency.

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[70] Економічна теорія: Політекономія: Підручник / За ред. Е45 В.Д. Базилевича.— 6-те вид., перероб. і доп. — К.:Знання-Прес, 2007. — 719 с.

[71] Мельник С. Сутність і класифікація національних економічних інтересів./ С. І. Мельник, І. М. Горбан, М. Ю. Цуп // Науковий вісник Львівського державного університету внутрішніх справ. – 2014 - № 1 – С.57-66.

In the second case, the conflict of interests of the region and convergent business may worsen, which makes it necessary to find ways to economic compromises through:

- system of stimulation of innovative entrepreneurship;
- regional marketing, which forms the attractiveness not only of the territory, but also of the business located on its territory.

Among the imperatives of systemicity, we distinguish the principle of emergence and the principle of holism, which together ensure the integrity of the system.

Moshak S. (2017) and his associates argue that "emergence is the presence in the system of properties of integrity (emergent properties), ie such properties of the system that are not inherent in its elements"[72] (p. 61) in continuation of this statement may suggest in accordance with Geseleva N.(2013) that "emergence as a manifestation in the brightest form of the property of the integrity of the system, ie the presence in the economic system of such properties that are not inherent in any of its elements, considered separately. Outside the system, in general, emergent (from the English. Emergent - suddenly appears, suddenly pops up) - is the appearance of the whole properties, non-additive properties of its parts, ie properties that do not follow from the properties of its parts"[73]. (p.94)

Holism approaches the concept of integrity from the standpoint of the ratio of the whole to its part, the element. The principle of holism is very relevant in the choice of practical actions of the region or a convergent entrepreneur, when specific actions are based on the chosen methodology: individualism or holism. Philosopher Pavlenko J. (2014) declare the difference as follows: "By methodological individualism we mean an approach that assumes that social reality is described and clarified by reducing all its complexity to the level of analysis of individual behavior. The opposite of methodological individualism is methodological holism,

[72]Стратегічне управління конкурентоспроможністю: системний метод та екзистенціальна експозиція: монографія / [Мошак С.М., Мікловда В.П., Шандор Ф.Ф., Кубіній Н.Ю., Кубіній В.В.] – Мукачево: Карпатська вежа. – 2017. – 240с.

[73] Геселева Н.В. Емерджентні властивості системи / Н.В. Геселева, Н.М.Заріцька//бізнес-інформ. – 2013. – №7. – С.93-97.

which would consider the individual as part of a whole"[74]. (p.34) Holism as a systemic principle interacts with the principles of dialectics and strategy, it ensures the cooperation of the region and business as a whole system. Holism also enhances the synergy effect, which states that the simultaneous action of two actors in one direction is higher than the result, nor the sum of their individual efforts. Miklovda V. (2017) describes holism in the meaning: "The imperative of holism consists of two parts: the principle of coordination and the principle of integration. The national economy is divided into levels, each level - into units that differ in function, products and role in the development of the national economy. Coordination covers the interaction of units of one level, integration - between units of different levels. The principle of coordination states that the activities of any part in the context of the development of the national economy cannot be planned effectively if it is done independently of other units at this level. Therefore, the activities of units of the same level should be planned simultaneously and interdependently, for example, regional development planning. The principle of integration states that planning carried out independently at each level cannot be as effective as planning in interdependence at all levels. It is well known, for example, that a strategy or practice formed at one level of a corporation often creates problems for other levels."[75] (p.17-18)

An example of holism at the regional level can be (2017) "the primacy of the strategic goals of the region over the development goals of its individual components, and accordingly, the strategic management of districts in the region should be subordinated to the strategic management of the region."[76] (p.62) and at the enterprise

[74] Павленко Ю. Г. Методологический индивидуализм и холизм в экономике и социологии /Ю. Павленко// Вестник Института экономики РАН. 2014. – №3. – С.34-44.

[75] Конкурентоспроможність економічних систем та стратегічне управління нею: гносеологічний та утилітарний ракурси: монографія / В.П. Мікловда, Ф.Ф. Шандор, Н.Ю. Кубіній, С.М. Мошак, Ю.О. Дідович, В.О. Огородник, Я.С. Максимчук, В.В. Кубіній. – Мукачево: Карпатська вежа. – 2015. - 420 с.

[76] Стратегічне управління конкурентоспроможністю: системний метод та екзистенціальна експозиція: монографія / [Мошак С.М., Мікловда В.П.,

level - the consistency of the actions of structural units (in terms of convergent entrepreneurship ,

- the consistency of management of organic and innovative activities).

The principle of strategic orientation presupposes the existence of strategic management of both territorial and convergent enterprises. The principle of strategic orientation is based on the strategy and ways to achieve it. The significance of the innovation strategy was revealed in previous studies, when the factors of Alexander the Great's superiority were identified, which included "1. Organizational innovations were aimed at the cohesion, mobility…It is organizational innovation that allows to establish the institutional basis for further reforms that serve the advanced development of the country and gaining a leading position in the world. 2. Organizational innovations were supplemented by technical innovations, among which are mobile assault towers, rams, mechanical shells, etc. 3. The introduction of innovative technologies has covered the socio-political spectrum… 4. Economic innovations allowed to print own money and to provide rather low cost of resources. "[77] (p.84)

On practice principle of strategic orientation will be realized in the following directions (2020):

«- Providing economic preferences to enterprises belonging to the circle of strategic regional actors, ensure regional competitiveness and human development. In this case, they act as locomotives for strengthening the socio-economic potential and its labor elements.

- Information support, creation of a monitoring consulting center, which will provide information to existing and potential investors, etc.

Шандор Ф.Ф., Кубіній Н.Ю., Кубіній В.В.] – Мукачево: Карпатська вежа. – 2017. – 240с.

[77] Кубиний Н.Ю. Институализация инновационніх стратегий: ретроспектиивній бекграунд [Текст] / Н. Ю. Кубиний, Е. В. Пулянович, Т. И. Косовилка // Науковий вісник Ужгородського університету : Серія: Економіка – Ужгород : Говерла, 2017. – Вип. 2 (50). – С. 83–86.

- Implementation of strategic management, which primarily involves the definition of a vision, a concept for the development of a region, development of a strategy and justification of its implementation.»[78]

In addition, strategic involves the introduction of such levers of development as innovation culture, trust, tolerance, respect for the ideas of others, focus on teamwork, the ability to take into account their own intentions with the intentions of society.

The advantages of converged entrepreneurship are as follows.

1. Dynamic entrepreneurship is environmentally friendly in its content, which contributes to the preservation of the unique natural potential of the region. Intentions to preserve nature, its resources are an important social factor in improving the business image of the enterprise, which is an additional competitive advantage.

2. Dynamic winemaking is exclusive, unique to the region. At the same time, innovative, new products are an additional trigger for the decisions of participants in gastronomic tourism. All this creates a complex of attractiveness for visitors to the region. Gastronomic tourism is a way to increase cash flows to the region, which is a condition of economic growth and, accordingly, a source of investment in further development.

3. Increase the activity of local industry, businesses that produce local tourist goods (souvenirs, ethnographic clothing, accessories, etc.). In modern economic life, the concept of local industry is not used - it is a Soviet-era term, although its impact on the level of regional development is quite large and has the potential for development in areas where tourism and recreation are strategic areas of development. The role of local industry is not only economic (employment, income, investment), it is also the preservation of the cultural heritage of the region, its promotion among tourists, which promotes advertising and image of the region and is part of the marketing system in the area.

[78] Kubiniy N., Marhitich V., Kosovilka T. Modern Content of Strategic Regional Development Potential. *Economics and Business.*2020. №1. URL: http://eb.tsu.ge/?cat=nomer&leng=eng&adgi=945&title=Modern%20Content%20of%20Strategic%20Regional%20Development%20Potential

4. The cultural sphere is developing. This advantage needs to be explained. Culture, as we know, is a set of norms and rules that determine the behavior of individuals, groups of people and societies as a whole. The volume that is "cultivated" in the country, region, enterprise, it significantly determines the purpose, philosophy, strategy of economic activity and development in general from the macro-level to the nano-level. In this context, the development of a culture that will support converged entrepreneurship and at the same time be formed under the influence of its action, it is advisable to consider from positions:

- Innovative culture, which contains the focus of all actions on the search for new ideas and their transformation into innovation, is the desire to develop and constantly improve their skills, master the latest technologies, be open to new knowledge, etc. Lebedeva N., Jasin E, (2009) explained that "foreign research has revealed some cultural and psychological characteristics that influence innovation and attitudes towards it. Among them, the desire for the absence of hierarchy, equality of rights and powers, a high level of trust, those. social capital, decentralization of power, as well as psychological qualities characteristic of carriers of individualistic attitudes: autonomy, responsibility, distribution of responsibilities, mobility, striving for success, desire for rewards and encouragement, relying on your own opinion"[79].

- Culture and its integration with tourism and economy gives an additional effect, which is emphasized by Kubiniy N., Zavadyak R., Belen M. (2019), the autjrs declared the functions of triumvirat: "First function brings the adaptation of regional economic systems to the modern economy, knowledge economy, which is based on people, information and culture. Second supports the human development of both individuals and within the region, as well as at higher levels of public life. Third one forms a multicultural regional environment, the foundations of which are tolerance, respect and

[79] Лебедева Н.М. Культура и инновации: к постановке проблемы/ ЛебедеваН.М., Ясин Е.Г. // Форсайт. 2009. №2. URL: https://cyberleninka.ru/article/n/kultura-i-innovatsii-k-postanovke-problemy (дата обращения: 21.07.2020). 2020

trust, which in turn are the conditions for productive economic activity."[80] (p.107)

Ways to support convergent entrepreneurship on the example of Transcarpathia can be as follows (Fig.1):

1. On the example of one of the most promising areas of convergent entrepreneurship in Transcarpathia - viticulture and winemaking - it is possible to propose to create a network of centers of gravity.

Under the center of gravity, we mean the centers that attract consumers of products and services to a particular territorial point, which creates a multiplier effect for the development of territory and business (formed the appropriate infrastructure, hotel, restaurant segment, etc.) An example of such centers of gravity there may be a "chateau" system, which forms the business and territorial advantages of the French wine-growing territories.

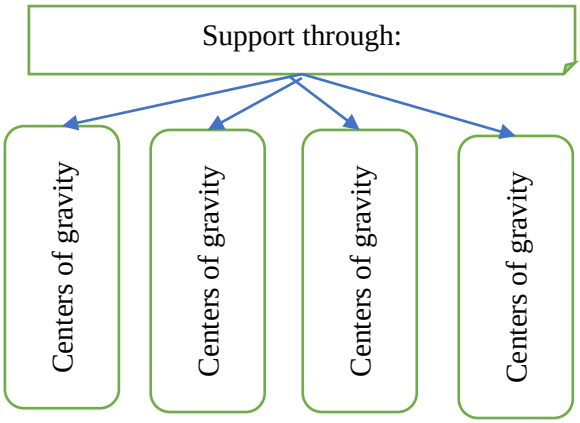

Fig.1. Ways to support convergent entrepreneurship
Source: Formed by authors

[80] Kubiniy N. Culture, Tourizm and Economy as a Triumvirate of Regional Strategic Development / Kubiniy N., Zavadyak R., Belen M.// Вісник Херсоньского університету. – 2019. – Вип.34. – С.105-108

2. It is expedient to legislate the state financial support of convergent entrepreneurship due to its prospects and complexity at the same time. Converged entrepreneurship simultaneously directs financial resources to two areas - organic production and innovative production, which requires large investments. In addition, both organic and innovative entrepreneurship are high risk, so financial support from the state will help reduce a variety of hazards from natural disasters to market crises. At the same time, it is advisable to support the insurance business, which cooperates with the converged business.

3. Building a marketing system that includes both regional marketing and business marketing campaigns. Regional marketing allows to emphasize unique opportunities of the territory and to promote increase of a tourist stream. The importance of business marketing is emphasized by MP Sagaidak, who argues that "the main competitive advantages" provide competent strategic marketing management of business portfolio and intangible assets (brand, knowledge, experience and qualifications of employees able to establish feedback and provide quality customer service, corporate culture and values)"[81].

4. Formation of a regional innovation system that will support the innovative activity of convergent entrepreneurship. Soboleva TA, analyzing the state of innovation activity in Ukrainian enterprises proves that "at this stage of formation of the innovation context of innovation in Ukraine we can conclude that only the point of application of the model of open innovation on the basis of individual companies, or more correctly talk about the possibility of implementation innovation models with a certain degree of openness"[82] (p.118). The university should become an active

[81] Сагайдак М.П. ABC- та BSC-технології у забезпеченні стратегічного маркетингового управління промисловим підприємством // А.В. Шайкан, М.П. Сагайдак, М.І. Іщенко // Ефективна економіка. – 2013. – №8 – Електронне фахове видання. – Режим доступу: http://www.economy.nayka.com.ua/?op=1&z=2156

[82] Соболєва Т. О. Інноваційна діяльність в Україні: тенденції в контексті реалізації відкритих інновацій / Т. О. Соболєва // Стратегія економічного розвитку України. - 2014. - № 34. - С. 113-118. - Режим доступу: http://nbuv.gov.ua/UJRN/seru_2014_34_22.

participant in the regional innovation system, and the creation of an innovative laboratory of viticulture and winemaking at the University of Uzhgorod will produce unique plant species, technologies for viticulture and winemaking, as well as packaging and transportation innovations.

The introduction of new forms of entrepreneurship, their connection with the interests of the region, allow using regional and business development potentials, form radical competitive advantages both for the territory and for business.

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INNOVATION MANAGEMENT STRATEGY THROUGH INTELLECTUAL DNA

Drago Orčić,
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The availability of modern technologies: the Internet, the media, the rapid flow of information, in the modern age of knowledge, has significantly affected business. While the old business models are outdated and unsustainable, the strategy of innovative business opens up new entrepreneurial opportunities. With a simple and easy access to an inexhaustible source of information, the creativity and innovative potential of an individual grows into an unlimited potential intellectual resource, necessary to create greater value through innovation. Discovering, measuring, developing, managing intellectual potential is, for that reason, a key element in the innovation management strategy that ensures the survival and advancement of modern business. The strategy of discovering, developing, materializing individual hidden inventive potentials in accordance with personal preferences, makes an individual an essential element of an effective innovation management strategy. A positive relationship between intellectual capital and the company's revenue growth rate depending on the industry, showed a survey of 401 companies in the Perm region conducted in 2005-2007. (Molodčik, Bikova, 2012).[83] In 2012, the same authors published the results of a survey conducted over 5 years on 332 European trading companies, which show that intellectual capital factors can both increase and decrease the value of a company in both the short and long term. The state and the industry and the size of the company play a big role in that. The higher the share of intellectual capital, the more radical the

[83] Molodchik, M. Shakina, E. & Bykova A. (2012). Intellectual capital transformation evaluating model. *Journal of Intellectual Capital*. Vol. 13. Iss. 4. (pp. 444–461).

innovations. This fact was proved by a research conducted on 93 American companies (Subramaniam, Youndt, 2005).[84]

The strategy of innovative approach, as a rule, puts into operation all potential resources that are available and the driver is always a human resource or his intellectual potential. "Intellectual potential is a set of knowledge, skills and creative talents of individuals, their educational and qualification abilities of levels that allow them to absorb the acquired knowledge and create new concepts of new knowledge, ie these are mainly abilities that a person possesses."

The notion of innovation cannot be tied only to science and high technology. Innovation is an innate part of every human being. Innovation has always been a human virtue. Innovation is "the efficient use of the latent potential that exists in an organization." The goal of Innovation is to "make a profit on ideas that are new to the organization" Innovation should be a key element of every company's strategy. Innovation is part of intellectual capital. Innovation comes through a process driven by the individual! The process of innovation begins with an idea, the idea turns into a proposal, the proposal becomes a plan. When an idea is turned into a plan, a detailed business plan is developed that can be invested in. The investment, when realized, increases the value of the organization and brings profit.

Innovation is a process initiated by an individual that begins with an idea that is new, at least for the organization considering its adoption (Figure 1). Innovation takes place in stages. When an idea develops, often in combination with other ideas, it can become a "proposal" - something the organization can choose to invest in. If an organization decides to adopt a proposal, then investment is usually required and previous ways of working may need to change, sometimes radically. When a proposal becomes a reality, in a good case it begins to add value to the organization - then it can correctly be described as "innovation". We define innovation as "getting new ideas and fully exploiting their latent potential". Each phase is an

[84] Subramaniam M. & Youndt M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal*. No. 48. (pp. 450–463).

element of the innovation process. Separately they are important but they are not in themselves innovations. Innovation requires that the organization benefit from the latent potential preserved in the idea. Innovation is a strategy for gaining and maintaining a competitive advantage.

The importance of intellectual potential during the innovation process.

In the age of knowledge, we are in, measuring, managing intellectual potential has become a strategic task of business strategy. The future is conditioned by the development of a strategy that is directed towards innovative capacities, ie the individual, through the detection, measurement and development of his intellectual potential. The focus, on individual values, preferences, of the individual is the key to an effective business strategy of the future. The higher the share of intellectual potential, the more radical the innovations. Human resources management can also be defined as a strategic approach to managing one of the most valuable resources of an organization, which are employees of the organization who individually or collectively contribute to achieving its goals (Martinović, Tanasković, 2014).[85] Since the individual is the initiator of the process of innovation, discovery, development and materialization, intellectual potential has become an imperative of innovation management strategy. Therefore, it is necessary to create innovative management strategies directed from the individual to the task and not vice versa.Given that in the age of knowledge, human potential plays a key role in the process of creating greater value, we can no longer observe it and treat it as an "extended arm of the machine." It is necessary to view each individual as a potential initiator of an innovative idea and also as a potentially active participant in the course of the innovation process.The gap between personal natural inclinations or natural intellectual potential on the one hand and the procedures that an individual must adhere to on the other, can be recognized as a key reason for lack of inventiveness, new ideas and initiatives to start the process of innovation. Motivated by this fact, we turned the management strategy "from task to

[85] Martinović, M. Tanasković, Z. (2014) *Menadžmetn ljudskih resursa,* Visoka poslovno-tehnička škola strukovnih studija, Užice.

individual through procedures" in the opposite direction. From the individual, his natural potentials, according to his unique intellectual DNA, to the task in accordance with the personal potential and preferences of the worker. The management strategy "from task to individual through respect for procedures" excludes the possibility of natural activation of the part of intellectual potential that manifests itself in the form of creativity and inventiveness, while the reverse management strategy encourages the same. For this purpose, we created a tool for discovering the hidden individual intellectual potential, which we called "intellectual DNA". In the past three years, the tool has covered over four hundred individuals in more than ten companies in Croatia, Serbia and Macedonia. In addition to the extremely positive reaction of the respondents, the benefits were shown in several key areas of business. The higher the degree of creativity of the individual, the higher productivity with a far lower level of stress. It was also reflected in better communication between associates, and thus in greater efficiency with less misunderstanding and conflict, significantly greater employee satisfaction, and increased sales results. More frequent and efficient initiation and management of new ideas and many others.

Intellectual DNA

By "Intellectual DNA record" we mean the mental, emotional, character, educational, and other conscious and subconscious individual specifics of an individual that result in different experiences of the same event. As early as the beginning of the twentieth century, the famous psychologist Allport pointed out individual differences between individuals, emphasizing that each human being differs from the other, among other things, in the way he perceives, remembers, thinks and solves problems (Cassidy, 2004).[86] There is an opinion that cognitive styles represent individual ways of acquiring and processing information (Kozhevnikov et all.

[86] Cassidy, S. (2004) „Learning Styles: AN Overview of Theories, Models and Measures“. *Education Psychology*, 24. 420-444. http://dx.doi.org/10.1080/0144341042000228834

2010)[87]. Cognitive style is a characteristic by which each individual differs from others, and it can be said that cognitive style is "a personal signature, stamp or fingerprint of an individual" (Stojaković, 2000: 22).[88] Cognitive style is less susceptible to change because it represents something that is more determined by the genetic basis of the individual (Pritchard, 2009; Stojaković, 2000). [89]

Intellectual DNA implies a whole system of individual natural characteristics of a person. Since the natural characteristics of a person are understood as interconnected sets of cognitive, affective and behavioral functioning, under the term intellectual DNA, we include all these characteristics together. In this way, by recognizing the unique Intellectual DNA of an individual, we get an exhaustive insight into his natural inclinations.

Today, there are a large number of typologies that differ based on the criteria by which preferences and differences between individuals are defined. It is important to emphasize that no typology encompasses all the key characteristics, nor does it allow people to be strictly and rigidly classified according to them. They indicate more significant sets of traits that occur relatively often together, so according to these regularities, it is possible to classify them closer to one category than to another. Intellectual DNA was created in response to the growing need to recognize natural individual characteristics in order to harmonize procedures and tasks according to personal natural inclinations and potentials, in order to achieve greater creativity, inventiveness and efficiency without stress.

The recognition of personal differences as a research area has been greatly contributed by scientists in the field of personality psychology, among which C. G. Jung, the creator of the theory of psychological personality types, stands out. According to Jung's typology of personality, presented in 1923, he roughly divides the

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[87] Kozhevnikov, M. Motes, M. Hagarty, M. (2010) „Spiritual Visualization in Physics Problem Solving“, *Cognitive Science*, Vol. 31. Issue 4, https://doi.org/10.1080/15326900701399897

[88] Stojaković, P. (2000). *Kognitivni stilovi i stilovi učenja* [Cognitive Styles and Learning Styles], Banja Luka: Filozofski fakultet.

[89] Pritchard, A. (2009) *Ways of learning: Learning theories and learning styles in the classroom*. London: Routledge; Stojaković, P. (2000). *Kognitivni stilovi i stilovi učenja* [Cognitive Styles and Learning Styles], Banja Luka: Filozofski fakultet.

basic characteristics of an individual into introverted and extroverted personality types. Both of these types are later classified into their subgroups depending on the way they interact with the environment. According to Jung's division of basic personality types, they can belong to the thought personality type, the emotional personality type, the sensitive and intuitive personality type, and each of them can be extroverted or introverted. So according to Jung, there are at least two ways of interacting with the outside world, that is, experiencing the same event. The experience can be perceived through extroversion in how much a person is extroverted as opposed to introverted if the person is introverted. From this we conclude that the same business challenge or task is perceived by people in different ways and thus they react to it in at least two different ways.
If through the analysis of the intellectual DNA of individuals involved in the process of creating greater value we could in advance identify to what type the person belongs, we could accurately predict not only how a person will perceive a task or business challenge, but also how he would react to it. Based on the knowledge of the intellectual DNA of the participants or potential participants, it is possible to develop an adequate personalized strategy that would imply a higher degree of inventiveness and efficiency without additional stress. Let us give some examples:

- Extrovert persons make decisions easily and quickly, react decisively, solve challenges on the go, make friends easily, aspire to social interaction. They are characterized by action and relaxation. Creativity and inventiveness in this type is manifested through a gambling approach in solving potential challenges.
- Introvert persons make slow decisions, react hesitantly, solve challenges studiously, are oriented towards the inner world, love privacy and silence. They need to be given more time to think carefully before deciding on any action. Creativity and inventiveness in this type is manifested through an analytical approach in solving potential challenges.

In addition to the extroverted and introverted type of person, in relation to the perception of an idea, information or task, a person may possess a sensitive or intuitive character.

- Sensitive personality types are dominated exclusively by facts gathered by the senses, focused on specific details, on the present. For that reason, they aspire to solve practical and realistic tasks. in a practical and realistic way.
- Intuitive types have a wide range of diverse interests. They have the ability to combine and manage different ideas. They are skilled in solving challenges that require new approaches. They don't like routine and repetition. They are focused on intuition and finding new solutions to problems and they enjoy it.
- Depending on how the perceived information is processed, individuals may possess a mental or emotional approach.
- Persons of the thought type of perception are characterized by analytical thinking. Decisions and new ideas are made on the basis of an objective, logical analysis of all possible causes and consequences.
- It is characteristic of people with a sensitive type of perception that their decisions and new ideas are based on subjective assessment in relation to their previous experiences.
- Perception and evaluation processes indicate how an individual perceives the world and how he makes relations between things and events depending on the way the perceived information is judged.
- People with more pronounced assessment need good organization, proven strategy, pre-planned action.
- Persons belonging to the perceptual structure react spontaneously, flexibly. They are curious, they are more focused on the process itself than on the outcome of the event.

Perception of new idea and intellectual DNA

The body's natural reaction to the unnatural and the unknown is stress. Stress is a normal phenomenon, ie a man's defense mechanism, which occurs when a man is exposed to a situation in which his body and life are endangered. (Klinic Community Health,

2010).[90] Stress is a phenomenon that occurs due to an imbalance in the demands placed on an individual and his ability to cope with those demands. (Ptičar, 2014).[91] So stress is a natural reaction of the organism, to all kinds of challenges, including a new idea, which occurs in moments when a quick reaction, decision, or adaptation to a new situation is needed. Although the concept of stress is not new, it was avoided until 1946. The term stress was used by Hans Selye who had researched it before. He is distinguished by the research he conducted in 1932. Although Selye was the founder and promoter of this topic, he was by no means the only scientist who dealt with the phenomenon of physical reaction to a crisis event, stress. Cardiologists Meyer Friedman and Ray Rosenman, in the 1950s, linked personality type to stress tendencies. The main argument for this conclusion was the assumption that different personality types deal with stress differently. Selye continued to be the main proponent of the idea of stress and the impact of stress on behavior. His work initiated numerous other researches that led to the knowledge on the topic of stress, which are still used today. (Spiegel, 2014)[92]

"Stressors can be specific and nonspecific. These include threats to life of any origin, intense competition among members of the same species, prolonged conflict, learning how to avoid painful stimuli and / or unpleasant experiences, conditions characterized by fear, foreboding, meeting strangers, novelty, unpredictability or change."

Unforeseen business challenges that result from stress cannot be completely eliminated but it is possible to align the jobs of the task performance procedure with the unique intellectual DNA of the individual. The perception of the same inventive idea as the individual's participation in the innovation process differs in the

[8]Klinic Community Health. Stress & Stress Management. 2010. http://hydesmith.com/de- stress/files/StressMgt.pdf;
http://www.npr.org/sections/health-shots/2014/07/07/325946892/the

[91]Ptičar, Mirjana: Upravljanje stresom i psihosocijalnim rizicima na radnom mjestu – planirane aktivnosti. Hrvatski zavod za zaštitu zdravlja i sigurnosti na radu http://www.hzzzsr.hr/images/documents/Upravljanje%20stresom.pdf

[92] Spiegel, A. (2016) The secret history behind the science of stress. https://www.wnpr.org/post/secret-history-behind-science-stress

relation with the individual's intellectual DNA. In the following text, we will present only a few basic models of intellectual DNA and describe their perception of an idea or event.

The intellectual DNA of a dominant person

People with a highly pronounced dominant style are very ambitious and result-oriented. They have a high degree of self-motivation. They withstand pressure well. They are ready to face novelties, challenges and do not run away from responsibility. They are very competitive. They love the taste of victory. They rely on their own potentials. They are not too inclined to seek the help and support of the people around them, except when absolutely necessary. Because of the expressed desire for independence, they avoid projects and situations in which their steps and decisions depend on other people. They are very impatient and prone to making quick decisions even when they involve risk. They are not inclined to philosophize and have aimless discussions. They are primarily focused on the results and on the results that are visible. They have an extremely strong will. They are determined in their endeavors. They do not like to be controlled and supervised. They fight hard for their ideas. They like the dynamics in business. They are constantly striving for new ideas, challenges and opportunities. They like to play "big" and be involved in several projects at the same time. It is more natural for them to give than to receive instructions. In communication they are clear, direct. They have no need to soften things up. In the process of innovation, they want to get to the core as quickly as possible. They like a precise, concise, logical and realistic presentation of a new idea. They do not like when someone else's perspective is explicitly imposed on them. They prefer to be briefly and clearly shown the situation and that in the end, they are the ones who make the decisions. Due to their strong focus on fast results and high goals, they tend to ignore the feelings and perspective of their associates even though they are not aware of it. They encourage the team to work hard, to make quick solutions and have discipline. They do not tolerate excuses. The source of stress is the loss of control, management and freedom. In stressful moments, they are prone to attack, aggression.

The intellectual DNA of an expressive person

People with a pronounced expressive style are very charming, optimistic and friendly. They are very communicative. They express their new ideas and emotions without difficulty. They are proactive and by nature focused on the needs of their associates, team members. They tend to discuss their private things at work, and since they are creative and often full of various ideas that they like and want to share with others, they can leave the impression to co-workers that they are superficial. They love to be seen and popular. Positive acceptance by the environment is very important to them. Admiration and praise are their fuel. Because they are very sociable, they tend to pay attention to the feelings and needs of others. They usually have a very large influence within the organization. They tend to find innovative and creative ways to solve challenges. They are quite informal. They express emotions easily. They talk a lot and are open to change. They like to learn. They like to discuss new ideas. They aspire to activities that involve a lot of interaction. By nature, they are optimistic and competitive. As team members they tend to be a generator of positive energy. In the process of innovation, their associates and team members feel quite safe when they need to express their suggestions and dilemmas. They are committed to relationships. They avoid conflicts if they think there is a different way to achieve the goal. They often have an inspiring effect on the team. They give feedback regularly. They know how to skillfully "pack" bad reviews. The biggest fears are to be publicly embarrassed, loss of approval, loss of influence. In stressful situations and under pressure, they have a tendency to become impulsive, selfish, disorganized, superficial, manipulative, and they tend to change decisions.

Intellectual DNA of a stable person

People with a highly expressed stable style are very warm, reliable, patient, consistent and predictable. Compared to others, these people are most team-oriented. They like stability, a slower pace of work when introducing innovations or making decisions. They like it when events are predictable, under control and when they happen according to established protocols and procedures. They are very sensitive to the needs and feelings of other people. They

usually pay more attention to the needs of others than to personal needs. Good and stable interpersonal relationships with other team members are their key motivation at work. They are extremely loyal, dedicated to the task, always in the mood to set aside their time to be of service to others. They respect honesty and transparency in interpersonal relationships. They selflessly invest in building stability and trust in relationships. They perceive changes as a risk and perceive potential risk events as a danger. For this reason, they are often inclined to choose to remain in unpleasant environments rather than face uncertain changes. Although they are very emotional, these people do not have the habit of expressing their emotions too much. Compared to other types of intellectual DNA, these people have the greatest tendency to stifle and suppress their emotions. Especially those that could lead them in the direction of changing the existing situation. Clearly defined tasks, clear roles with clear instructions are a pleasant natural environment for them. They are very persistent. They are not inclined to give up on the goal they have set for themselves. In the process of innovation, it is difficult and slow for them to decide on certain changes, but when they move towards them, they do not give up until they finish the started process. Improvisations and an unplanned approach to solving challenges in them cause a high degree of stress, especially if it can have a negative impact on the people they care about. They enjoy working in small groups. Stress can be caused by moments when they are in the center of attention, especially when they are surrounded by strangers. They are great listeners and prefer to ask questions rather than draw conclusions. Their fears are sudden changes, uncertainty, the possibility of hurting others with their behavior or decisions. In moments of crisis, they have a tendency to withdraw, be compliant, passive and closed.

Intellectual DNA of an analytical person

People with a highly pronounced analytical style are extremely analytical, systematic, methodical, diplomatic. They are primarily focused on tasks, expertise, competence, excellence, perfection. They are striving for perfection. They like to respect procedures, order and that everything goes according to the agreed rules. They are measured, accurate, precise. They tend to be independent in thinking

and making decisions. When meeting new ideas, they look for enough time and space to think, analyze, connect information and facts. They are ready to enter the discussion only when they are thoroughly prepared, armed with facts and information. They are not ready to deviate from facts and logical conclusions. When making decisions, they rely exclusively on verified information obtained from several different sources. They are thoughtful. In the process of innovation, they usually demand a lot from themselves and others. In everything they do, they strive for perfectionism. Especially in a technical sense. They like to get acquainted in detail with the procedures and expectations so that they can perform correctly and make decisions. It is not natural for them to express their thoughts and emotions directly. It is important for them to gather enough information before making a decision. They usually wait for others to take the initiative. They are reserved and suspicious of unknown persons. They prefer to work with a small number of people. They do not like conflict situations and try to avoid them at all costs. Their biggest fear is to make mistakes and be criticized. In crisis situations, they tend towards excessive perfectionism. In those moments, they can be sarcastic, petty and critical. Already from this partial review of certain individual's intellectual DNA, we notice different perceptions of a new idea or business challenge depending on the personal DNA record. Each of the above groups of intellectual DNA perceives the same idea or innovative process differently, reacts differently and in accordance with personal natural inclinations makes different decisions, takes different roles, and contributes to the innovation process in a unique way. One type of person perceives the same idea or event as stressful, while another type of person perceives it as stimulating. A new business idea to which one group of individuals, in accordance with their intellectual DNA, approaches rationally, cautiously and measuredly, the other approaches emotionally, hastily, and often without thinking about the possible consequences. For this reason, it is desirable, almost necessary, for the team leading the innovation process to be composed of individuals with diametrically different intellectual DNA.

Conclusion

We have applied this innovative approach to the participants of the training program "what makes an adventure called entrepreneurship" within the project "innovation in action", which is supported by the Cabinet of the Minister of Innovation and Technological Development of the Republic of Serbia, held in the period from 13.11.2019 to 16.12.2019 intended for potential entrepreneurs. Thirty-four entrepreneurs participated in the program. We based the strategy for starting the business idea of each participant on natural inclinations, personal potentials, ie on the unique intellectual DNA of each participant. The participants were introduced to the fact that each of their future collaborators has a unique intellectual DNA code. Based on that, through training, they became able to develop a strategy for building a collaborative structure according to the model: "the right man in the right place" where future associates would be able to work naturally, without stress. Through the evaluation questionnaire that the participants filled out at the end of the course, the question to what extent intellectual DNA helped in the development of business strategy was rated with the highest grade by all participants.

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INTANGIBLE ASSETS AS A STRATEGIC IMPERATIVE OF INNOVATION MANAGEMENT

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Intellectualization of the economy marked an individual and human potential as a powerful factor in economic development. The main value is the development of the educational, intellectual and creative potential of a person, as the main sources of the emergence of intellectual activity. At present, most of the GDP of developed countries is formed by technologies, which were created with the help of new knowledge and ideas. It is acknowledged that scientific knowledge and specialized unique skills become the main source of the development of material and non-material production and ensuring continuous economic development[93].

Interest in the issue of intellectual assets (IA) was caused by a shift in emphasis from tangible assets to the processes of innovation and investment in the development of intangible and intellectual assets. In the scientific and practical literature there is no single concept of the categories "intellectual assets", "intangible assets", "intellectual capital", and this leads to difficulties in management and in obtaining optimal results of innovations commercialization.

Intellectual capital is an active element, a system of intellectual values (knowledge, skills, experience, creativity, information and other intangible assets) which create value and during the reproduction provide a certain result and competitive advantages for an individual, an enterprise and the whole country. In intellectual capital there are usually three components. There is human capital (knowledge, abilities, experience, personnel skills), structural capital (organizational structure and resources, intellectual

[93] Карпенко А. В (2014). Державна стратегія ефективного використання економічних ресурсів в умовах світової глобалізації / А. В. Карпенко // Вісник Національного університету водного господарства та природокористування : збірник наукових праць. Економічні науки. – 2014. – Вип. 3(67). – С. 126-135.

property) and client capital (relations with external stakeholders)[94]. Capital is everything that is capable of generating income, resources created by people for the production of goods and services. We can conclude that each component of intellectual capital has the ability to make a profit both independently and combining the totality of its properties. Moreover, each element of intellectual capital has assets in its composition.

The concept of assets has many definitions, for example, "a set of property rights (material values, money, etc.) which belong to an individual or legal entity[95]. The criteria for the recognition of intellectual assets designated in financial reporting standards are the following: IA must accumulate future economic benefits; must be controlled by the enterprise, the cost can be measured reliably[96].

Knowledge is one of the main characteristics of intellectual assets. Intellectual assets in the process of their use provide concrete results of intellectual, mental, spiritual and creative activity, they create intellectual products, the main component of which is knowledge. The production of knowledge, its capitalization, and commercialization led to the emergence of such a business process as knowledge management.

Intellectual assets include two groups of objects – objects of intellectual capital, displayed in reports in the form of intangible assets; objects not included in the reporting system[97]. At the same time, intangible assets that are not displayed in the financial statements are called goodwill (the difference between the book

[94] Карпенко А. В (2017). Інтелектуальні активи: етимологія поняття та місце в національній інноваційній системі / А. В. Карпенко // Економіка і організація управління. – 2017. – Вип. 4 (28). – С. 65 - 80.

[95] Борисов А. Б. (2006). Большой экономический словарь / А. Б. Борисов. – М. : Книжный мир, 2006. – 860 с.

[96] Ибрагимов Е. Е. (2012). Моделирование влияния интеллектуальных активов на эффективность корпоративного управления с ориентацией на знания / Е. Е. Ибрагимов // Формирование рыночных отношений в Украине. - 2012. - № 5/1 (132). - С. 119-124.

[97] Ляшенко Н. Є. Проблеми оцінки інтелектуальних активів в управлінні / Н. Є. Ляшенко // Управління проектами та розвиток виробництва. - 2009. - № 3. - С. 58-67. - Режим доступу: http://nbuv.gov.ua/UJRN/Uprv_2009_3_9.

value and market value of assets), which is capable of generating asset values and synergistic effects.

Quite often in normative instruments, intellectual assets are understood to comprise intangible assets together with ownership or other rights in the assets. Intellectual assets, such as the qualifications of employees in the performance of their duties, the existence of a unique company development strategy, and skilled management capable of implementing and developing certain company strategies, are not taken into account. Also, in this context, it is possible to identify marketing researches for successful launching; relationships with buyers and suppliers; unique ideas for improving the production process, reduction of costs; creation of advertising campaigns for a more successful promotion of products in the market, etc.

It has been suggested that intellectual assets should include those that have been identified, described and charged to the balance sheet of the business. This means that some undeclared assets that are not included in the balance sheet will not be susceptible to management influence, and therefore will not receive additional benefits from their use. However, practice shows that the use of intellectual assets is not necessarily related to their presentation on the balance sheet. Their identification allows them to be effectively managed in the future.

Intellectual assets have the potential not only to increase the carrying amount but also to capitalize a company with the possibility of attracting additional investment resources. Intellectual assets in a modern economy are an integral part of the development potential of an organization, as well as its long-term competitiveness in the market[98]. Many objects can be classified as intellectual assets, among which patents, trademarks and copyrights are of particular importance. Intellectual assets include both registered and unregistered intellectual property: trade secrets, business process features, manuals, project specifications, software source codes and other unpublished know-how. National and international patents are

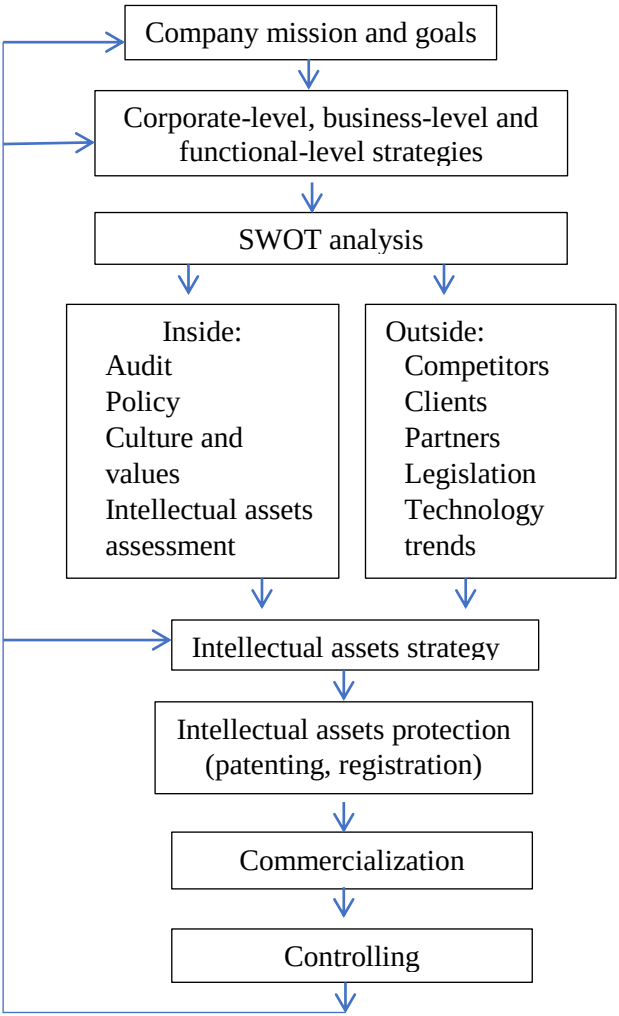
[98] Мошак С.М. и др. (2017). Стратегічне управління конкурентоспроможністю: системний метод та екзистенціальна експозиція: монографія [Мошак С.М., Мікловда В.П., Шандор Ф.Ф., Кубіній Н.Ю., Кубіній В.В.] Мукачево: Карпатська вежа. – 2017. – 240с.

also included; copyrighted works; trademarks; industrial designs and other forms of registered intellectual property.

The creation, accumulation and efficient use of intellectual assets is possible only if there is an effective system for managing such assets in the organization. As intellectual assets increasingly contribute to business and economic growth, each organization should have an intellectual asset management strategy. Successful intellectual asset portfolio management means aligning the intellectual property management strategy with the goals and objectives of the entire business. If there is no intellectual asset management strategy, there is a high risk of loss of intellectual assets as well as competitive advantages. The management of intellectual assets requires an integrated approach that manages all assets in the enterprise to maximize benefits.

Intellectual asset management is much more than a process of patenting and licensing inventions. All intellectual assets should be taken into account in management. For most companies, patents are only part of intangible assets. Corporate information, ideas and trade secrets are also actively used. Information to be included in the list of intangible assets may include substance and product formulas, production processes, start-up plans, packaging features, research directions, testing methods, business plans, strategies, supplier conditions, competition analysis, customer lists, marketing plans, sales forecasts, budgets, financial forecasts, price analysis and employee lists.

Management of intellectual assets involves several steps (fig. 1). Each stage is linked to and predetermined by the next, resulting in more effective action. As a result, there is synchronization between the collection of scientific and technical information, its protection, asset analysis and intellectual property licensing. The company achieves efficiency in many business processes during intellectual asset management. An important element in the management of intangible assets is the comparison of the results of an analysis of internal and external factors for the development and implementation of an intangible asset management strategy. It should take into account the company’s intellectual asset management policies and management strategies at all levels.



Picture 1. Intellectual assets strategic management
Source: formed by authors

An effective approach to managing intellectual assets addresses the following four challenges[99]:

1. Identifying intangible assets to systematize information about potential intellectual property that a company can use to increase income.
2. Protection of intangible assets to ensure that the company can retain its proprietary rights to those assets.
3. Optimizing the value of an organization's assets.
4. Creation of intangible assets that is most likely to increase profits.

The creation of intellectual assets is a deliberate process of generating information that leads to the creation of intellectual property that can be commercialized and made profitable.

Communication and cooperation among all stakeholders is key factor in any business context, particularly in creating an environment in which the strategic management of IP assets will be successful. The level of knowledge of the staff[100] and the creation of an organizational culture[101] are important in this context. Effective IP management requires the efforts of the entire organization. Creation of universal «intellectual property culture» is the most effective way to create a successful strategy[102]. The more staff is informed about what management does and what they need to do to maximize the effectiveness of the intellectual asset portfolio, the more successful the strategy will be.

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[99] Fine N.R. (2003). Intellectual Asset Management: From Information to Intellectual Property to Profit / Naomi R. Fine // Pro-Tec Dat. – 2003. – Access mode: http://www.pro-tecdata.com/pdf/IAM-InfoIPProfit.pdf

[100] Gagnidze, I. (2018), "The role of international educational and science programs for sustainable development (systemic approach)", Kybernetes, Vol. 47 No. 2, pp. 409-424

[101] Paresashvili, Nino. (2016). Corporate Culture In Terms Of Labor Diversity. International Conference,,Smart and Efficient Economy: Preparation for the Future Innovative Economy, (pp.321-327 pg.). Brno, Czech Republic

[102] Krelitz, Susan Prohofsky and Sellke, Alex, (2014) "Intellectual Asset Management at the Speed of Business," Cybaris®: Vol. 5: Iss. 1, Article 2. Available at: http://open.mitchellhamline.edu/cybaris/vol5/iss1/2

An important step in any organization that manages intellectual assets is to monitor (audit) existing assets[103]. This is also very important for organizations whose IP portfolio has increased through, for example, recent growth, acquisitions, internal research and development, or the sale of assets. During the audit process, attention should be paid to the ownership of the intellectual assets, namely which objects are owned by the company and which are received or transferred under a license. There should be a review of non-patented inventions, patent applications, granted patents. Note the ownership rights and terms of contracts for software developed by or for the organization. Identifying trade secrets, focusing on commercial information that adds value to an organization, including intellectual assets such as customer lists, processes, prototypes and strategic plans, is essential. Attention should be paid to the registered and unregistered signs used by the organization in different jurisdictions.

This audit process can be visualized as a simple list of assets or can be detailed in a more detailed table or electronic catalogue. It may include more sophisticated traceability systems, accompanied by intellectual property lawyers that track royalties and extensions of rights in registered intellectual property.

The organization should also inform its staff of the strategic importance of intellectual property within the organization. It is a process of raising awareness of the various types of intellectual property as well as the policies of the organization with respect to these assets. The management of the organization should be involved in this process, demonstrating the importance of creating and protecting the intangible assets of the company. The intellectual property management strategy should be integrated into the overall business strategy, as well as incorporate internal policy elements such as privacy and disclosure of inventions. The company's privacy policy emphasizes the importance of maintaining secrecy until a patent application is filed or an improved product is put on the market. Intellectual property lawyers can also play an important role

[103] Stobbe R. Intellectual asset management best practices – part 1 / Richard Stobbe // Field Law. – 2014. – Access mode: https://www.lexology.com/library/detail.aspx?g=172f939b-eee1-43ec-9413-ff45d0462cc4.

in training and be a resource for domestic policy-making, the analysis of agreements and the drafting of treaty provisions governing intellectual property law.

The next important point in the management of intellectual assets is the consistency of intellectual property strategy with the overall goals and objectives of business. Coherence necessarily requires a well-articulated vision of the future of business and the ability to determine and measure their current use[104]. In this regard, the development of performance indicators for intellectual assets at different stages of their life cycle is of paramount importance.

In addition to identification, accounting, auditing, cataloguing and protection, the logical goal of managing intellectual assets is their efficient use. The use of intellectual assets may take different forms. A company may use its assets with the traditional aim of achieving exclusivity in the market and preventing competitors from entering its segment. Monetization of intellectual property through licensing agreements is a common practice among both commercial and non-profit organizations. Access to technology through joint ventures and strategic alliances can be another use strategy. Sometimes the use of intellectual assets can be simply an advantage for public relations and have nothing to do with the flow of money. For example, IBM has long sought to be the leader in the number of patents granted each year in order to enhance its reputation as an innovative inventor[105]. The use and monetization of the intellectual property portfolio is constantly increasing. Some options include obtaining an IP loan, patent auctions, litigation, direct sale or transfer of intellectual asset rights.

Enforcement of intellectual asset rights is the most cost-effective aspect of managing an intellectual property portfolio, which includes both enforcement through compulsory payments and the enforcement of rights against violators. As in other areas of business,

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[104] Krelitz, Susan Prohofsky and Sellke, Alex, (2014) "Intellectual Asset Management at the Speed of Business," Cybaris®: Vol. 5: Iss. 1, Article 2. Available at: http://open.mitchellhamline.edu/cybaris/vol5/iss1/2

[105] Krelitz, Susan Prohofsky and Sellke, Alex, (2014) "Intellectual Asset Management at the Speed of Business," Cybaris®: Vol. 5: Iss. 1, Article 2. Available at: http://open.mitchellhamline.edu/cybaris/vol5/iss1/2

planning, cooperation and strategy are required to obtain more at lower cost. As markets become global, the costs required to effectively monitor and enforce trademark and patent rights become prohibitively expensive for some companies. For those who can afford it, litigation is the preferred strategy, but trials are becoming increasingly costly.

Thus, the key to the successful management of intangible assets in an organization is to align the intellectual property strategy with its business strategy. Important aspects are the identification (audit) of the IP, its cataloguing, the alignment of the IP strategy with the entire strategic set in the organization, the effective use of IP and the enforcement of IP rights. All of these steps require a conceptual systems approach, planning and the use of modern and successful market practices.

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DEFINING THE ENTERPRISE RISK-APPETITE

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It is almost impossible to carry out any economic activity avoiding risk altogether. Entrepreneurs who manage their businesses take risks every day and act as a driving force developing the country's economy. The absence of risk usually indicates lost opportunities, while risk always implies a silver lining – a favorable, desired outcome. Therefore, the risk is a natural component of every economic situation.

Risk management's peculiarity is that people see the positive and negative part of the risk and respond to it. The negative side of risk, the side of danger, requires a person to treat it carefully, namely to avoid or protect himself from it. The positive side of risk leads to the realization that to get more income, one needs to agree to more risk. The combination of potential benefits with certain dangers motivates to face the risk. The risk-benefit ratio for each executive may be different and indicates the subjective nature of the risk.

Several concepts are used in risk management to determine the subjective perception of risks in making managerial decisions. These are concepts such as "risk capacity," "risk appetite," and "risk tolerance."

Definitions of risk appetite and risk tolerance are determined in international and national standards of risk management.

The recommendations of the Committee of Sponsoring Organizations of the Treadway (COSO[106]) state that the starting point in shaping the organization's strategy is the risk-appetite of the enterprise, which is considered as an acceptable ratio between risk and return or as an increase in the value of the enterprise.

According to the FERMA[107] standard (The Federation of European Risk Management Associations), risk appetite is

[106] Enterprise Risk Management – Conceptual Frameworks. College of Management http://www.mgt.ncsu.edu/erm/ERMConceptualFrameworks.php.

[107] Federation of European Risk Management Associations. Risk Management Standards.

considered to justify strategic alternatives at the stage of setting goals that correspond to the chosen strategy and developing mechanisms to manage the relevant risks. Thus, risk appetite combines the evaluation and selection of alternatives that will best help achieve the desired goals in making strategic decisions based on risks.

According to the ISO 31000:2009 Standard Risk Management – Principles and Guidelines[108], risk appetite is the amount and type of risk, the possible consequences that the organization considers acceptable for itself.

ISO 31000:2018 Risk Management Guidelines[109] also address similar concepts, namely the attitude to risk, which is the behavior of the organization towards risk, which is manifested in its approach to risk assessment, and ultimately, the willingness to take the risk or avoid it, accept, or reject it. Risk tolerance is considered here as the willingness of an organization or its stakeholders to accept a certain amount of risk variability after their processing. Risk avoidance is seen as an attitude to risk, which implies complete rejection thereof.

Figure 1 shows the differences between "risk capacity," "risk appetite," and "risk tolerance," which include the definition of the concept, its characteristics, and the parameters of the activities of the enterprise, which are involved in its definition.

To establish a risk appetite, it is necessary to build a risk profile. This means assessing several risks over time based on the organization's forward-looking assumptions before and after implementing risk mitigation measures. The risk profile may include risks that are relevant to the whole or part of the organization[110].

Issues of risk assessment and risk appetite were considered by Khominich I.[111], (2019), Rittenberg L.[112], (2012), Masino M.[113], (2017).

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http://www.ferma.eu/riskmanagement/standards/risk-management-standard

[108] ISO 31000:2009, Risk Management - Principles and Guidelines, Geneva: International Standards Organization, 2009.

[109] ISO/IEC 31000:2018. Risk management – Guidelines.

[110] ISO/IEC 31000:2018. Risk management – Guidelines.

[111] Финансы организаций: управление финансовыми рисками: учебник и практикум для среднего профессионального образования / И. П.

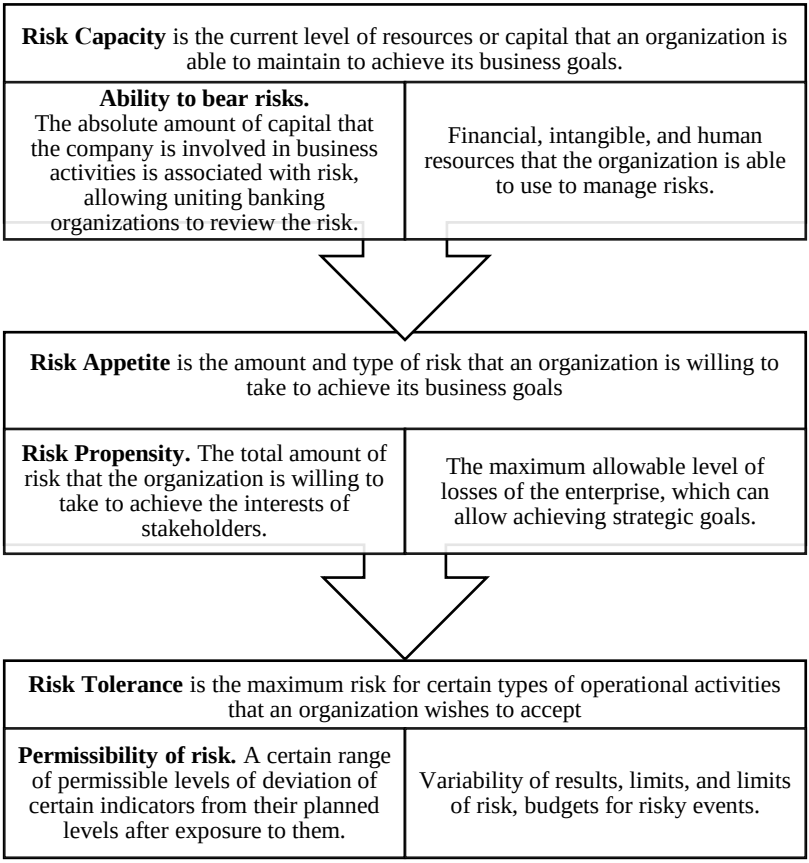

Figure 1. Comparative analysis of "risk capacity," "risk appetite," and "risk tolerance."

Source: Formed by authors

Хоминич [и др.]; под редакцией И. В. Пещанской. — Москва: Издательство Юрайт, 2019. — 345 с. https://biblioonline.ru/bcode/442106

[112] Rittenberg L. Understanding and Communicating Risk Appetite. Enterprise risk management / Larry Rittenberg, Frank Martens // Research Commissioned by COSO: 2012. – 23 p.

[113] Масино М.Н., Ларионов А.В. Методика построения архитектуры риск-менеджмента в платежных системах. Финансы и кредит, 2017. - Т. 23. № 31, С.1832-1849.

They state that risks are estimated using available statistical information. Still, in most cases, the risk profile is based on the expert judgment of crucial company employees who participated in discussions and roundtables.

The limitation of such methods is the need for a deep understanding of the company's business processes, the availability of historical data on the course of events in the organization for a specific period, determining the most significant risk factors, the retrospective nature of such assessment, which can only rely on past experience.

Indicators of the risk profile are used as guidelines for the optimal or marginal level of risks monitored by the enterprise (Figure 2).

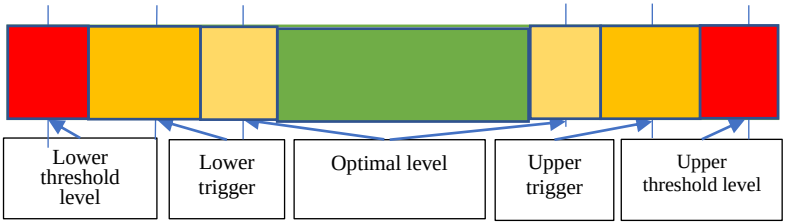

Figure 2. Risk Profile
Source: Formed by authors

The risk appetite level determines the threshold value for monitoring that the actual risk does not exceed the desired or optimal. As a rule, the risk threshold acts as a trigger for corrective action at the level of ensuring the achievement of organizational goals.

Tolerable levels of risk are related to the organization's goals and represent an acceptable level of deviation from the goal, so it is best to measure them in the same units as the corresponding goal.

The upper and lower thresholds of the indicator determine the risk appetite of senior management to the risk that arises about the risk.

It is also essential to establish a risk trigger, i.e., actions for each risk event in specific indicators of the assessment of this event,

i.e., these are the criteria in the presence thereof we believe that the risk was materialized.

Risk Triggers are symptoms, signs, or indicators that risk events have occurred or are about to happen, and they signify that we have gone beyond the optimal level of risk. Thus, the risk owner will understand that the preventive actions did not work, and it is necessary to take some additional measures, the so-called plan B.

In the process of forming a risk profile, it is also essential to determine the owner of the risk. The owner of the risk is the one who is directly involved in the dangerous event and can track it (because it is he who will check that specific actions are performed). One person cannot be the owner of all the risks – it must be the first person to notice the trigger. Defining triggers will allow risk owners to understand and assess the level of danger.

Setting a risk appetite facilitates communication between the C-suite and the management in the executive process. The executive statement of risk appetite is to ensure that risk behavior within the organization reflects the interests of the company's shareholders, the Board of Directors, and other stakeholders.

Table 1 illustrates the different situations that may arise when establishing the practical assessment of risk capacity, risk appetite, and risk profiles; it exemplifies different approaches to integrating risk profiles in terms of risk appetite and risk capacity.

Indicators of risk-appetite and risk tolerance should usually encompass all areas of the company: the tolerable level of loss of revenue or profit, the variability of income or profit; credit rating, interest related to debt service, interest on borrowed funds; reputation, and brand; assortment expansion, launching new products; the service life or existence of special equipment; justification of the target audience, customers or geographic markets for business; supply chain management; mergers and acquisitions; environmental impact: the number of incidents related to environmental damage; corporate governance and compliance with regulatory restrictions; human resources: staff turnover among management, staff turnover, training costs as a percentage of revenue; employee safety and others.

Table 1. Different approaches to integrating the risk profile into risk appetite and risk capacity

The correlation between risk profile, risk appetite, and risk capacity	Impact on goals	Remedial actions
The risk profile is less than the lower threshold.	Achieving the goals is under threat.	Loss of opportunity due to a lack of reasonable risk.
Risk profile within the upper and lower trigger.	The optimal attitude to risk is a risk within an acceptable threshold.	Measures are aimed at maintaining risk at an acceptable level.
Risk profile between the upper trigger and lower threshold.	Rising risk requires a sufficient risk-reward.	Requires remedial action to prevent threats.
The risk profile exceeds the upper threshold.	Goals under threat.	Actions need to be adjusted.
The risk profile exceeds the risk capacity.	Non-viability.	A risk management strategy plan needs to be changed.

Source: Formed by authors

There is a set of possible indicators used in one form or another in determining the risk appetite. These indicators are related to the established goals of the enterprise. The traditional indicators include:[114]

1. The value of the company.
2. The value of net assets.
3. Profit (EBITDA, gross profit, margin, etc.).
4. Various values of efficiency indicators.

The purpose of usage of these indicators to set the risk-appetite is to determine the acceptable change in the proposed parameters'

[114] Federation of European Risk Management Assotiations. Risk Management Standards. http://www.ferma.eu/riskmanagement/standards/risk-management-standard

percentage value, which will not undermine the company's goal achievement, according to the Board of Directors. According to the Board of Directors (Board) opinion, it will not significantly impact achieving the company's goals.

Risk-appetite is considered as one of the main parameters of control and management within the company. Consequently, the establishment of sufficient risk appetite involves:

- introduction of the process of communication between the enterprise and external stakeholders (for instance, shareholders, investors), as well as between executives and top management within the company;
- management both "top-down" from the highest management body to all lower levels of supervision, and "bottom-up" with the participation of executives at all levels of management of the organization;
- induction of risk-appetite into the culture of risk management at the company; the risk management culture consists of norms and traditions of the behavior of individuals and groups within the company, which determine how they will identify, analyze, discuss and handle the risk of the organization, how the organization resists or accepts risks;
- establishment of the threshold level for each significant risk in the form of a target indicator, based on the overall development goal, risk-appetite, risk potential, and risk profile;
- use of the statement of risk-appetite as a tool to encourage the parties involved in the results of risk-based activities with respective accrual for potential risk;
- use of internal audit reports for thoughtful discussion and disallowance of recommendations and decisions of management on compliance with the established level of risk appetite;
- adaptation to changing business and market circumstances and increasing the risk threshold, if necessary, as per agreed risk appetite for the enterprise as a whole;
- encompassing outreach to every aspect of the company's activities that come within the scope of risk, but are beyond its direct control, including subsidiaries and suppliers;

- connection with short-term and long-term strategic plans of the company, capital, and finances, as well as with other remuneration programs;
- justification and determination of quantitative indicators that can be turned into a risk threshold;
- formation of qualitative statements (reports) that determine the motives for accepting or avoiding certain types of risk, including reputational risks;
- enablement of coordination of strategy and risk threshold for each area of activity as per requirements;
- understanding of what events may push the company beyond its risk-appetite or risk capacity.

To manage the risk appetite, a risk map is often used, which indicates the acceptable level of risk relative to the unacceptable. The matrix risk map is a graphical and textual description of a limited number of risks of the organization, depicted in a rectangular table, one axis of which indicates the severity of impact of risk, and the other - the probability or frequency of its occurrence. Because of the external similarity, such a risk map is sometimes called a "matrix" (Fig. 2). Matrix quadrants combine the probability of materialization of certain risks with the significance (severity) of the impact.

The risk profile and the risk map based on it are the primary source of information for decision-making on further risk handling. Risk handling means moving points along the plane of the risk map. Overwhelmingly, the risk is moved closer towards the zero mark along with one of the axes without changing the value of another coordinate. However, if it is possible to minimize risks along the severity and probability axis, it is an optimal scenario.

There are many designs of risk maps. You can design a risk map with a different number of categories of impact severity and probability. It can be a matrix of 3x3, 4x4, 5x5, etc. However, an increase in the number of categories should be justified by the respective improvement of the assessment's effectiveness.

Many organizations rate the risk-appetite qualitatively as high, medium, or low, while others use quantitative measures. Quantitative assessment of risks is the most convenient for their further analysis.

A qualitative-quantitative method of composing a risk map is also possible.

The process of risk assessment plays an important role in determining of the risk appetite, which means comparing the results of risk analysis, presented in the form of estimated levels, with risk criteria to determine these risks' tolerability. As a result of the certification, the Board of Directors must evaluate the acceptability of risk for the company for each element of the matrix, i.e., establishes a tolerance threshold. For example, high probability/high loss is almost always unacceptable, and low probability/low loss is mostly acceptable. For averages (average probability/average level of losses, low probability/high level of losses, and vice versa), the Board of Directors must determine the acceptability of risk. It means defining the limit (line) of risk tolerance in the risk matrix.

The risk tolerance threshold is identified by a company's management executive decision. Risks located above and to its right are considered "unacceptable" and require direct attention from the management. Risks that are found below and to the left are considered acceptable.

The line of risk tolerance varies depending on the organization's risk appetite. The limits of risk acceptability allow to immediately visually determine the distribution of risks by category regarding the danger they pose.

Methodologies used for the diagnosis of the economic state of a company can be applied to elaborate a risk map.

The method of creation of a risk map with the following steps is suggested:

Step 1. Identification of all possible risks that may affect the achievement of enterprise goals.

Step 2. Elaboration of a risk profile: determination of relative levels of probability and severance of risks.

Step 3. Determination of the quantity of columns and rows for forming a risk map and forming quadrants, for instance, a 3x3 matrix contains 9 quadrants A1-A9.

Step 4. Determining the company's level of risk acceptability by senior management, i.e., establishing a tolerance line.

Step 5. Putting on the map of risk points, the coordinates are formed by the values of relative levels of probability and risk impact severity.

Step 6. The development of measures to minimize risks in certain areas of the map to an acceptable level, according to the location of a specific risk on the map.

Let's consider an example of the usage of this methodology.

Step 1. Identification of all risks that may affect the achievement of the company's goal registered the following risks:

X_1 - rising prices for raw materials supplied for the manufacturing of products;

X_2 - reduction of demand for products;

X_3 - non-compliance of manufactured products with world quality standards;

X_4 - increase in electricity prices;

X_5 - fluctuations in the UAH exchange rate for export transactions;

X_6 - increasing staff turnover.

Step 2. To rank the types of risks according to their relative probability and impact severity in this method, the pairwise comparison method is to be used. When using this method, experts make pairwise comparisons of the evaluated indicators. This form of comparison is the simplest, which expedites experts' mission and simplifies the form of the risk map. The additional information contained in the matrix of paired comparisons of factors (estimates of the results of direct comparison of characteristics by experts and assessments obtained indirectly through the comparison of features with other, intermediate aspects) allows users to significantly reduce the impact of errors in a pairwise comparison of factors in the process of further data processing.

A group of experts fills in the matrix of pairwise comparisons using a unique verbal-numerical scale:

$$X_{ij} = \begin{vmatrix} X_{11} & X_{12} & \dots & X_{1m} \\ X_{21} & X_{22} & \dots & X_{2m} \\ \dots & \dots & \dots & \dots \\ X_{m1} & X_{m2} & \dots & X_{mm} \end{vmatrix}$$

Where X_{ij} is the result of comparing the i^{th} factor with the j^{th}.
Assign the grades according to the verbal-numerical scale:

1 – if the risk X_1 is less probable or impactful to the risk X_2;

0.5– if risk X_1 has the same probability or impact severity as risk X_2;

1.5 – if the risk X_1 is more probable or impactful to the risk X_2.

Completing the matrix should consider the requirement of mutual complementarity of estimates:

$$X_{ij} = \frac{1}{X_{ji}}$$

It should be mentioned that to build a risk map, you must first rank the types of risks according to their probability and then according to its impact severity.

An example of a matrix of pairwise probability comparisons is shown in Table 2, and the impact severity in Table 3.

Table 2. Example of a matrix of paired comparisons to scale the probability of risks accomplishment.

X_{ij}	X_1	X_2	X_3	X_4	X_5	X_6	$\sum$
X_1		1,5	1	0,5	1	1	5
X_2	0,5		1,5	1,5	1	1	5,5
X_3	1	0,5		0,5	1	0,5	3,5
X_4	1,5	0,5	1,5		0,5	1,5	5,5
X_5	1	1	1	1,5		1	5,5
X_6	1	1	1,5	0,5	1		5

Source: Formed by Authors

Table 3 - Example of a matrix of paired comparisons to scale the impact/severity of the risks.

X_{ij}	X_1	X_2	X_3	X_4	X_5	X_6	$\sum$
X_1		0,5	1,5	1	1	0,5	4,5
X_2	1,5		1	0,5	1	1,5	5,5
X_3	0,5	1		1,5	1,5	1	5,5
X_4	1	1,5	0,5		1,5	0,5	5
X_5	1	1	0,5	0,5		0,5	3,5
X_6	1,5	0,5	1	1,5	1,5		6

Source: Formed by Authors

The total amount determines the number of points scored by each specific type of risk for other risks in this sample. The sample is composed of all the risks identified in the profile.

Step 3. Determining the intervals of construction of the risk map and the creation of fields A1-A9. The following algorithm determines the intervals of construction of the risk map:

1. Estimate the minimum and maximum values on the risk map.
2. Ascertain the length of an interval.
3. The values of the interval limits are determined.

The calculation of the minimum value of the risk map is carried out according to the formula:

$$X_{min} = 0{,}5 * (m - 1)$$

In this example, the number of factors is m=6.

$$X_{min} = 0{,}5 * (6 - 1) = 2{,}0.$$

The calculation of the maximum value of the risk map is carried out according to the formula:

$$X_{max} = 1{,}5 * (m - 1)$$
$$X_{max} = 1{,}5 * (6 - 1) = 7{,}5.$$

The interval's length is based on the assumption of its linearity and the number of intervals - 3. The formula calculates the length of the interval:

$$\mathrm{X_{iнт}} = \frac{X_{max} - X_{min}}{3} = \frac{7{,}5 - 2{,}0}{3} = 1{,}83.$$

The error arising from the rounding to the second decimal digit in such calculations is insignificant. The formulas determine the values of the boundaries of the intervals:

$$\mathrm{X_{iнт1}} = \mathrm{X}_{min} + \mathrm{X_{iнт}} = 2{,}0 + 1{,}83 = 3{,}83;$$
$$\mathrm{X_{iнт2}} = \mathrm{X_{iнт1}} + \mathrm{X_{iнт}} = 3{,}83 + 1{,}83 = 5{,}66.$$

For this example, the values for the interval limits will be the same:

$$\mathrm{X}_{min} = 2{,}0;$$
$$\mathrm{X_{iнт1}} = 3{,}83;$$
$$\mathrm{X_{iнт2}} = 5{,}66;$$
$$\mathrm{X}_{max} = 7{,}5.$$

The severity intervals are determined similarly. As a result, a risk map is created, on which the areas of risk classification are highlighted (Fig. 3).

Step 4. The risk acceptance level, which determines the company's tolerance to identified risks, is determined by the company's management as follows:

low risk - Severity 2.00-3.83 and probability 2.00-5.66; Severity 3.85-5.66 and probability 2.00-3.83; these risks can be kept under control, but they do not require any development of measures to influence them;

medium risk - Severity 2.00-3.83 and probability 5.67-7.5; significance 3.84-5.66 and probability 3.84-5.67; Severity 5.67-7.5 and probability 2.00-3.83; these risks require attention, for this purpose, the critical figures of these factors are calculated;

high risk - Severity 3.84-5.66 and probability 5.67-7.5; Severity 5.67-7.5 and probability 3.84-7.5. The area of most significant risk and further analysis of factors, as they have the most significant impact on the achievement of the goal and have the highest probability of implementation, for these risks, measures are developed that can reduce their degree.

Figure 3. Map of identified risks

Severity	Probability		
	2,00-3,83	3,84-5,66	5,67-7,50
2,00-3,83		X_5	
3,84-5,66	X_3	X_1; X_2; X_4	
5,67-7,50		X_6	

Source: Formed by Authors

Step 5. Putting on the map of risk points, the coordinates are formed by the values of relative levels of probability and risks. This step involves a pairwise assessment of all the sample risks, first by probability and then by severity. Values are likely to be positioned horizontally, and severity values are put vertically. As a result, we obtain a map that identifies each type of risk (Fig. 3).

According to the considered risks, X_5 and X_3 do not demand much attention; X_1, X_2, and X_4 require analysis of critical values and

justification of measures that will allow them not to exceed the acceptable level; X_6 - requires significant attention and management influence to reduce it.

It should be indicated that the risk map gives an idea of the relative level of probability and severity of different types of risk, i.e., compares all risks with each other.

Step 6. While substantiating the methods of risk handling associated with adverse effects, use the following procedures[115]:

risk elimination - measures that altogether avoid the impact of specific adverse events;

risk reduction or risk mitigation - measures that help reduce the effects of company's or individual's adverse actions. It means that the risks remain the owner's responsibility, sometimes called risk retention or risk assumption;

risk transfer - measures to shift responsibility for reducing the possibility of adverse events and compensation for related damage to another entity.

This approach will allow us to quickly and easily analyze and assess the identified risks. To justify risk management measures, C suite relies on risk appetite, which is considered as a regulator of the highest level of company management, which is acceptable for management and is aligned with their ambitions, concerns, and level of comfort of doing business.

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[115] Чернова Г. В. и др. Страхование и управление рисками: учебник для бакалавров.; под редакцией Г. В. Черновой. – 2-е изд., перераб. и доп. – М.: Издательство Юрайт, 2014. – 767 с.

CHAPTER 3. SOCIAL AND ECONOMIC IMPERATIVES OF THE MANAGEMENT TRANSFORMATIONS

MANAGEMENT NEEDS IN THE SOCIETY OF DIGITAL TRANSFORMATION

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In the current stage of economic development, the economy of any European country needs a new generation of leaders who are able to synthesize academic, professional and information competences, including the ability to work in a dynamic and volatile global environment, and who are able to make decisions, tackle issues, plan and set priorities. Students are provided with an opportunity to enhance their employment prospects through advanced courses focusing on digital business innovation, marketing and communication strategies, development of emotional intelligence, financial literacy and leadership.

Digitalization is a major tendency in the contemporary global economy. "Everything is changing – you, your family, your neighborhood, your education, your job, your government, your relation to the others. And they are changing dramatically".[116]

The digitalization of society is pursued in relation to individuals, whereas businesses and the public sector create new models of

[116] McLuhan, Marshall (2001), Understanding Media: The Extensions of Man. Routledge, the 1st Edition.

collaboration among people, businesses, and government institutions. Such developmental trends yield new professional competencies for a modern manager, which requires the application of innovative and technological knowledge in various fields of management. Integrating information systems with digital communications in an organization's management system enables many of the company's business processes to be enhanced, such as customer service, enhancement of manufacturing processes and inventory management, enhancement of its accounting and reporting system, which generally increases the efficiency of management decisions.

This tendency increases the need for talented graduates with digital management skills who can help companies compete in a global business environment.

From the business changing process of the previous point, we can start to analyse the requirements for managers' competences in the next future. The main cultural jump will be to use simultaneously all the classical management capabilities, from strategical to operational and vice-versa according to the organizational situation, and to adequate the behaviour to the culture of the different teams, involved in the various projects, to which one participates. So, the classical managerial skills, from analytical ones to the planning and control skills, from organization design to budgeting and performance indicators, should absolutely not be forgotten, but a lot of new hard and soft skills must be added.

We already referred to the Project Management techniques and style as the core competence, because the new structure of organization will be based on many projects performed by multi-competence teams, measured on results developed according to timing strategically prefixed, but with flexible and autonomous pattern decided within the team. Therefore, management will study and implement a general framework strategically consistent and control the results, without too much entering in organizational details and procedures, to leave the maximum space to personal creativity and contribution, managing on the border of what traditionally was looked at as a chaotic situation. Due to the fact that these teams are not only internal to the firm, but in collaboration with suppliers and clients not only in the local market, but mostly in a

very international context, negotiation and coordination challenges are much more frequent than in present situation. Therefore, the managers should have been trained to multicultural environment, geopolitical factors, and different level of technological developments of the people.[117]

Other critical variables of future companies will be the relentless innovation in products and services, international competition/cooperation on innovative initiatives, and the continuous development of decisional techniques and processes automation at any level of the firm.

The innovation front requires forecasting capabilities and entrepreneurial ones. A lot can be done scouting and integrating new start-up initiatives coming out from Universities as a spin-off or from new young entrepreneurs, identifying the new market or social needs or leveraging on new specialized technology.

But this is also a new competence for managers, and very scarce one at the moment, because traditional big companies have the "not invented here" approach to external success story, looking at them with skepticism, as the start uppers know very well when they meet managers of big firms. This competence of scouting the best from the scientific and technological environment, now particularly from green new industries, must be developed through educational programs and direct contacts with knowledge most updated centers of research and development. Also, entrepreneurship courses should be necessary, to develop more proactive entrepreneurial attitudes in managers, already put in the past to the attention of the big companies, which are too much bureaucratic in their structure and processes.

There is a growing demand for a highly-skilled workforce capable of quickly absorbing and mastering innovations. The report "Doing Business in the Digital Age: The Impact of New ICT Developments in the Global Business Landscape"[118] by the

[117] Merlino, M., Kuzmina-Merlino, I. (2019) Managers' Competences and Managers' Education in Digital Era. Proceedings of the 9th ICLTIBM, December 12-13, 2019, Istanbul, Turkey, pp. 438-447.

[118] Deloitte (2013), Doing business in the digital age: the impact of new ICT developments in the global business landscape. Deloitte: European vision and action

multinational company Deloitte, indicates that there is "demand for a new generation of specialists-executives". Such need is created by the increasing role of digital technologies, which is the most important source of growth for national economies. Digital technologies are changing the world, organisations, business, society and setting new demands for specialist education. In this context, the European Commission has formulated the following vision for the labour market: "Europe aims to accelerate transformation of the business environment by developing and wisely using digital technologies to accelerate growth and create jobs." To achieve this goal, three tasks have been set:

1) to become a magnet for highly qualified talents and a great place for business;
2) develop an entrepreneurial culture to harness the digital potential of European economics, focusing on small and medium-sized companies;
3) actively maintain and develop the link between traditional industries and digital economics.

What competencies must modern leaders have in order to be competitive in the European market? A study "Employers' Needs and Expectations for Qualified Employees", conducted by Latvian scientists in collaboration with the Erasmus University Rotterdam, led by Professor B. Sloka, identified the key competencies that Latvian employers require from young specialists. They are as follows: loyalty to the company and business, ability to plan their own time, ability to do business independently, communicativeness and desire to improve.[119]

Results of this study are in line with the statements made during the 12th European Quality Assurance Forum by Anita Līce, the Head of Education and Employment of the Employers' Confederation of Latvia. According to employers, the competencies necessary for managerial work "should be concentrated on developing the

plan to foster digital entrepreneurship. The report has been prepared for the European Commission DG Enterprise and Industry.

[119] Sloka, B., Buligina, I., Tora, G. (2015), Employers' Needs and Expectations for Qualified Employees: Case Study on the Opinions in One of the Region of Latvia. In: Economics and Business 27(1), pp. 69-75.

competencies related to emotional intelligence such as responsibility for one's own decisions, attitude towards work and colleagues, work motivation and ability to adapt to new situations during the teaching and learning process"[120].

What competences should a manager have today? According to the authors, the set of competences that graduates of the Grenoble Ecole de Management will master under the Advance Master's in Digital Business Strategy program, best reflect the core competences of managers in the digital era:[121]

1) The leader who can drive a company's digital transformation,
2) The manager who knows how to identify and implement the opportunities for growing business created by the digital business environment,
3) The team member who has the required team spirit and global vision to develop and implement the company's digital business strategy.

Regarding the subject of new technology wave in the automation of operational but mostly also decision-making processes of a firm (AI), the argument of so many articles in magazines and newspapers, the possible approach is not so simple as to go to Human Resources department, and planning new recruitments with technical skills. The talent market is already in shortage of these scientific types of skills, and so probably service centers and consulting companies will be the main actors of this side of digital transformation. As at the time of operations, research managers are significantly not prepared to evaluate the efficiency and usability of an analytical tool or math model to decisional processes. The offer of sophisticated software on this subject will multiply, and someone must evaluate and purchase it. So at least some basics of knowledge should be diffused in

[120] EQAF (2017), The 12th European Quality Assurance Forum: Responsible QA – committing to impact. The University of Latvia, 23-25 November, 2017.

[121] Masterstudies.com (2019) Advanced Master's in Digital Transformation Strategy, Grenoble Ecole de Management. Available at: https://www.masterstudies.com/Advanced-Master%E2%80%99s-in-Digital-Business-Strategy/France/Grenoble-Management/

management to better evaluate and understand the organizational impact of these new automation trends.

All these change factors will have as a final result empowerment of the people in their work and in the social environment. People will be more creative and will want to be more respected in the desire to contribute to the firm with the more conscious role and work. The growing entrepreneurial attitude of single workers will be not easy to coordinate and to utilize without depressing their initiatives and making them converge to the common efforts and teaming for common objectives.

What is the competitive advantage of digital pioneers? They are leaders! That is one finding of a study by the Harvard Business School. The big question is though, which special skills managers need in order to become dedicated leaders for their teams. Leadership in the digital transformation is marked by fast-changing and complex environment, as well as diverse multi-competence teams that work closely together. Therefore, successful leadership depends on the right mindset and skills built on rational, emotional and digital intelligence:[122]

1) **the Intelligence Quotient (IQ) means skills "**to analyze and to apply past lessons to new situations**"**; they also need "to develop a deep understanding to be able to make complex decisions; in other words, they need the sharpest mind".
2) **the Emotional Quotient (EQ) includes communication skills:** "a successful leader, therefore, must be able to build collaborative relationships, foster diverse talents and influence different people".
3) The Digital Quotient (DQ) - this pillar might be the most apparent leadership trait regarding digital transformation. Managerial competencies refer to "a rapid adaption and transformation by injecting a digital mindset into the organization's strategy".

In recent years, there has been much talk of the shift from managers to coaches. This evolution is happening and testifies to the

[122] Whitehurst, Jim (2015), Driving Digital Transformation: New Skills for Leader, New Role for the CIO, Harvard Business School Publishing. Available at: https://hbr.org/resources/pdfs/comm/RedHat/RedHatReportMay2015.pdf.

challenges posed by digital transformation[123]. What is the manager's role when a company announces projects focused on innovation and disruptive technology when 50% of staff struggle to upload a video in less than a minute? The manager must not only convey the organization's strategic vision but also provide their team with the means to understand and adapt their work accordingly.

In terms of day-to-day support, managers have a pivotal role to play. Transformation is not so much a question of competence as one of culture and training to fit this culture. It becomes a matter of empowering staff by allowing them to explore and learn and helping them anticipate the obsolescence of their current skill set. A manager's primary role is to encourage this almost organic skill improvement by identifying learning opportunities based on the strategic corporate goals. Managers must also support and encourage self-training. As it was previously mentioned, training used to be done at specific times or dates; now, our relationship with learning has changed since we are continually training and learning new things. It also implies that managers give staff time to learn by allowing them to manage their schedules, for example, and creating dedicated time for training.

Finally, managers need to nurture employees by helping them understand multiple viewpoints and understand the goals of other departments within the company. It is essential to allow staff to understand their work fully by viewing it as an ecosystem and not merely as a set of meaningless tasks without concrete, measurable and understandable outcomes for the employee. Based on above mentioned we can name the main areas of contemporary management needs; they are following:

- Work: work will be more and more implemented in the multidisciplinary teams, finalized to specific transformational result;
- Time: throughput time in any process will be further shorter;
- Style: management style and leadership will be those of Project Management codified approach;

[123] eLearning industry.com (2018), Digital Culture at Scale by 360 learning. eBook. Available at: https://elearningindustry.com/free-ebooks/digital-culture-at-scale

- Knowledge: mathematics and statistics knowledge should be increased at any work level to better understanding of the structure and application possibilities of new AI tools and models;
- Skills: cultural and soft skills will be also required to integrate workers' experience in the digital transformation of a firm.

When a company is continually learning and adapting, managers tend to take on another role: that of centralizing, facilitating, and promoting best business practices and methods internally. It is up to him or her to encourage their team to document best practices, to highlight them, develop a process, and circulate content that is produced.

Managers are in charge of creating optimal working conditions in order to develop collective intelligence within the company. This role is paramount, especially when there is a generational renewal taking place within a team. Orchestrating the transmission of knowledge between senior staff members and younger employees (and vice versa) is essential. It helps save time and increases performance by leveraging knowledge accumulated within the company and making it actionable.

How to provide more effective educational approaches in supporting the management needs in the era of digital transformation? In our opinion, managers' educational programs should be formed in following logical sequence (Figure 1).

Digital transformation means the transition of companies and organizations to the digital management methods, which change the corporate culture and organizational behavior and which create the necessity to introduce new digital management tools. Digital transformation expands the organizational boundaries and helps restructuring the business models to deliver economic growth by blurring boundaries between the economic sectors.

Figure 1. Logical sequence of the study: Practice – Education
Source: Formed by authors

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MODERN CONCEPTS OF VALUE-ORIENTED MANAGEMENT OF BUSINESS ORGANIZATIONS

Tepliuk Mariia
Liezina Anastasiia

Business management is an integral part of its operation. How well it is carried out depends on the success of the business and the successful organization of the work of all units.

At the outset, let us define that any model of control is basically a concept. Management concept is a system of ideas, principles, ideas that determine the purpose of the organization, the mechanism of interaction between the subject and the object of management, the nature of interaction between the individual links of its internal structure, as well as the necessary degree of consideration of the influence of the environment on the development of the enterprise.

The factors that determine the functioning of the organization in recent years have transformed, resulting in the priority of an innovative approach to management. In science and practice, many new management approaches and concepts have been created that are aimed at improving business performance in response to changing and complex operating conditions.

In our opinion these include: TQM (Total Quality Management), BPR (Business process reengineering), Lean Management (lean production), TBM (Time Based Management), VBM (Value-based Management), MBV (Managing by Values), Six Sigma, Theory of Constraints, and benchmarking, outsourcing, controlling, knowledge management.

Before considering value-oriented management, it is necessary to consider the essence of the concept of "value" and aspects of its formation. The category "value" cannot be called new, because the problem of enterprise value orientation has been raised in the works of economists of different schools and areas. The interpretation of the meaning of this term is very different, especially in modern

science. In this regard, it is impossible to find a single universal definition of the value category, since the meaningful content of the term depends on the context and purpose of the study.

The value category, as a key criterion for the organization and functioning of the economic system, is the conceptual basis of the pricing process. Namely, price, as the embodiment of value, or its transformed form, plays a central role in the economic mechanism of the market, acts as a market indicator, an informative factor in the processes of intra-industry and inter-industry competition, the lever of processes of distribution and structural restructuring of the economy.

The analysis made it possible to identify the main areas in which the value category might be considered and which we would like to focus on in the following sections, exploring value in one of these aspects. Thus, one of them is a direction where the concept of value is seen as value and price, which act as indicators and informative factor in the processes of distribution and structural restructuring of the economy. The second aspect of the formation of this category we consider value as a lever of corporate culture and a means of management, which takes into account the human and inter-personal aspects of interaction.

In the material presented, we will look at the structure of a value-oriented management system on two sides: first, value side, as value, and second, value as the lever of corporate culture and the unifying factor of influence in management. This is due to the multidimensionality and diversity of interpretations of the category "value". And for a more in-depth definition of the field of concern for each of the aspects, we consider it worthwhile to also consider Value-based Management and Managing by Values.

The key element that determines the architecture of value-oriented management is the valuation module or value measurement system. The construction of this system involves three interrelated and, in some sense, consistent decisions: the decision to choose a model for valuation; the decision to choose a periodic indicator for determining the performance (one indicator or a set of such indicators); decision to build a system of drivers (factors) of value creation.

An evolution has taken place that has resulted in the emergence of four organizational trends over the past ten years that have forced the company to adapt to new conditions in order to remain competitive in a demanding and unpredictable market. Each of these four interrelated trends complicates organizational processes and exacerbates uncertainty.

Contemporary competition requires the constant creation of additional value to the production process for the full satisfaction of customers in relation to the relationship between the price of a product or service and its or its quality. This trend is personalized, a key factor in New Economy competition. Among them are:

1. The need for professional independence and responsibility. Professionals can articulate their values and turn them into concrete initiatives, into a creative workflow. They are independent, flexible and dedicated. A specialist who is not able to work independently, can't be considered a real professional, he is only a contractor who depends on the instructions of the manager. Independence is a prerequisite for being responsible for your work.

2. The need for leaders who would be leaders / coordinators. Employee autonomy, in turn, is impossible without leaders who can effectively organize the entire workflow. Instruction is a managerial tool for managers, and goals and objectives are coordinator tools. Leaders use values. Although there is a lot of controversy about the concept of leadership, it has been possible to formulate the generally recognized qualities of a leader: to inspire, direct the efforts of employees and unite teams of professionals.

3. The need for a simplified and flexible organizational structure. In other words, an organization with clear and shared values for all employees will be able to apply creative methods much more effectively, getting rid of complex structure and ambiguity. Although specific tasks and instructions reduce the complexity of the organizational structure and even eliminate its consequences, they stifle innovations that can emerge only when professionals are allowed to work creatively. A true competitive company must explain to its employees the importance of being able to adapt to complexity and ambiguity and to teach them how to do it.

Values that were previously considered "too soft" for effective management have now been taken as the basis of the organization's identity and the central tenet of its strategy. The idea of value management has quickly become a major driving force for re-engineering the competitiveness and well-being of the culture. At the same time, Managing by Values (hereafter referred to as MBV) was seen as an important characteristic of effective leadership not only by the adherents of spiritual leadership but also by the leadership of "pragmatists".

In essence, the content, structure and features of MBV is a new strategic leadership tool that is not just a new way of managing a company, but understanding and applying knowledge. Various forms of MBV exist worldwide in response to management's demands for corporate survival and differentiation. The main purpose of this system - the use of human or personal parameters in managerial thinking, not only at the theoretical level, but also in everyday practice. Research confirms that HRM practices bring greater return on investment than new technology, research and development (R&D), competitive strategy or quality improvement initiatives, and successfully recruit and retain staff for companies that are flexible and innovative in your HR policy.

The belief system and values that shaped North American management and the organizational model in the early 20th century are of great importance to new-type businesses. Traditional team-administrative practice stifles the creative process, critical to innovation, the ability to adapt to different conditions and compete successfully. The changes that took place in the 21st century led to a fundamental rethinking of the organizational structure and management philosophy on the path to renewing corporate culture.

The idea of value-oriented potential management is to identify all possible ways to create value for the enterprise in the chosen field of activity and to make decisions on the choice of each of them, based on the available and available, complexes "resources - abilities - competencies". Choosing ways to create value is a function of general management and, on the one hand, depends on subjective factors (leadership style, managers' propensity to take risks, etc.) and, on the other, relies on the results of capacity research. Therefore, at

the general level, the object of potential management will not be its structural elements, but the processes of their research in comparison with the identified ways of creating value[124].

The American professor, Doctor of Sciences in Human Resource Management, Simon Dolan proposed a three-dimensional model of values for understanding organizational culture as a combination of the three facets of an organization's values system: economic-pragmatic values, ethico-social values, and emotional development values.

For a more thorough presentation of the components, we will dwell on this issue in more detail. So, the three-dimensional model of values is:

- ✓ economic and pragmatic values that are necessary to support and integrate the various organizational subsystems. Encompassing performance, work standards and discipline, these values drive activities such as planning, quality control and accounting. Managers cannot ignore them because these values ensure the survival of the organization in a competitive environment;
- ✓ ethical and social values that are based on the beliefs and customs of how people should behave in public and at work and imply collegial and professional relationships. They can be associated with values such as honesty, honesty, respect and loyalty (the most common among them). These values are embedded in modern concepts such as "corporate social responsibility", "environmental sustainability" and "triune" (also known as "people, planet, profit");
- ✓ emotional and developmental values are essential to create momentum for action. They represent values related to intrinsic motivation: optimism, passion, perception of freedom and happiness.

The lack of these values may impede initiative, innovation and organizational commitment.

To these faces, we decided to add a few more, such as:

[124] Nazarenko I.M. The value of the enterprise is the main guideline of strategic management. [Electronic resource] Agrosvit № 11, 2013 – p. 14

- ✓ more individual-centered socio-economic values, which are mainly about creating the necessary opportunities for success and life. These can be values such as wages, the share of bonuses in employee income, the weight of the social package, profit sharing, dividends and more;
- ✓ values of socio-economic responsibility, which in particular include environmental and spiritual values. These include careful consideration of the environment, rational consumption and use of natural resources, social, economic and environmental balance and development, the formation of a coherent system of values and spiritual and cultural development of human society, rational use of resources and more.

It can be argued that the task of an effective manager is to create a culture that aligns these values with the "corporate core" that would lead to the creation of "corporate well-being". This is achieved when the core values of the organization are shared and aligned with the mission and vision of the organization. Determining what values and beliefs to retain, how to challenge them, how and when to begin the process of change, how to advance it, and most importantly, how to manage those values, are great opportunities as well as major obstacles.

The peculiarities of MBV are that this system includes a variety of issues that are not so easy to spot in everyday work, affecting the growing need for high quality work and customer focus; stresses the need for a flexible organizational structure and leadership that contributes to employee success; fills in the content of the purpose and actions of the staff, builds a culture that helps to direct the daily activities of employees to realize the strategic vision of the company; allows you to integrate ethical and environmental principles into corporate strategic management.

These MBA features are vital not only for the continued existence of the company, but also for the prosperity of our world at large. Summarizing the different approaches to MBA development, there are four main stages that lead to the creation and maintenance of a successful and promising enterprise (Fig. 1).

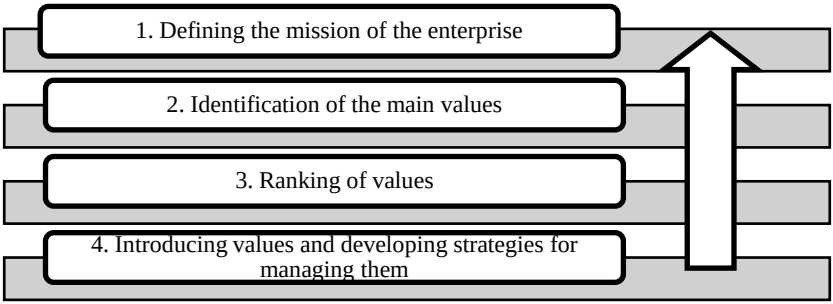

Fig. 1. Stages of practical implementation of value-oriented enterprise model.

Source: compiled by authors

Thus, managing corporate culture and values is an ongoing process. The organization functions and develops as a complex organism, its life potential, efficiency of functioning and survival in competition depend not only on strategies, clear organizational construction, appropriate management systems and highly qualified employees. The success of the company is also determined by its strong culture, special style, which, based on values, contribute to the achievement and preservation of leading competitive positions[125].

It should be noted that the use of a built-in scheme of functions and business processes of management, formation and use of staff will identify a number of interconnected business processes that have the lowest efficiency of personnel management. The defragmentation of these processes gives rise to measures to improve the level of productivity of staff. Accordingly, this will determine the priorities for the choice of directions for optimizing the functioning of the HRM mechanism, which should be applied in order to increase the competitiveness based on the implementation of the HRM components.

[125] Sahaidak, MP; Smirnov, EV; Teplyuk, MA Value-oriented management of transnational corporations. Bulletin, 2019, 464. Access mode: http://journals.khnu.km.ua/vestnik/pdf/ekon/pdfbase/2019/VKNU-ES-2019-N4.pdf#page=64

The formation of a mechanism for substantiating the strategy of improving the value system for enterprises is based on a functional approach, according to which the main functions of personnel management and business processes that ensure the implementation of these functions (Table 1).

Table 1 - Functions of personnel management on the example of a consulting organization

№	Function	№	Business process
1	2	3	4
1	Personnel analysis and planning function	1	The process of analysing the personnel policy of personnel management under the existing strategy
		2	The process of developing and adjusting personnel management policies
		3	The process of selecting a personnel management strategy
2	Recruitment function	4	Identify staffing needs from internal sources
		5	Identify staffing needs from external sources
		6	A comprehensive approach to identifying staffing needs
		7	Identification of the target needs for staff after the organization of jobs
3	Function of selection and placement of personnel	8	Selection of staff from internal sources and placement
		9	by workplace
		10	External staff selection and placement
4	Function of appraisal and evaluation of frames	11	by workplace
		12	Selection and placement of staff periodically,
5	Function of organization of labor relations	13	according to the functioning of the jobs
6	Staff motivation function	14	The process of evaluating staff performance
		15	The process of staff appraisal

Continuation of Table 1

1	2	3	4
7	The function of creating working conditions	16	The process of reducing conflict and ensuring a comfortable socio-psychological climate
		17	The process of influence of material factors of staff motivation
8	Information support function	18	The process of influence of intangible factors of staff motivation
		19	The process of managing the current safety of personnel
9	Function of staff development and training	20	The process of creating working conditions and monitoring the safety of staff activities
		21	The process of ongoing staffing and workplace monitoring
		22	The process of general staff accounting and workplace monitoring

Source: compiled by authors

It is also worth noting that organizational and economic factors of productivity growth include improvement of forms of organization of labor and production, improvement of the structure of the management apparatus, improvement of planning quality, improvement of the operational process management system, introduction of automated travel management systems, etc.

The decrease in the growth rate of labor productivity has a negative impact on virtually all aspects of production and economic activity, which clearly shows the "productivity trap" (Fig. 2).

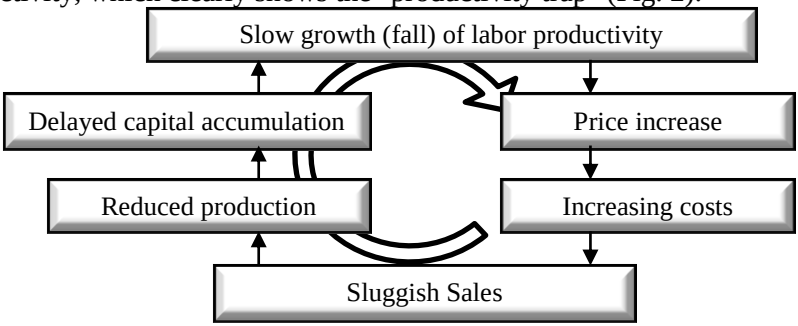

Fig. 2. Productivity Trap for Enterprise
Source: compiled by authors

Based on the above factors of influence, we can substantiate the directions of personnel productivity in the form of a cause and effect model, the model of which was created by Professor Isikawa Kaoru (Fig. 3).

The implementation of the principles and provisions of a value-oriented approach to the company's activities requires appropriate organizational support: carrying out training and explanatory work among staff, the distribution of powers and tasks among employees, the formation of implementation procedures and the evaluation of the results of value improvements with the appropriate information document.

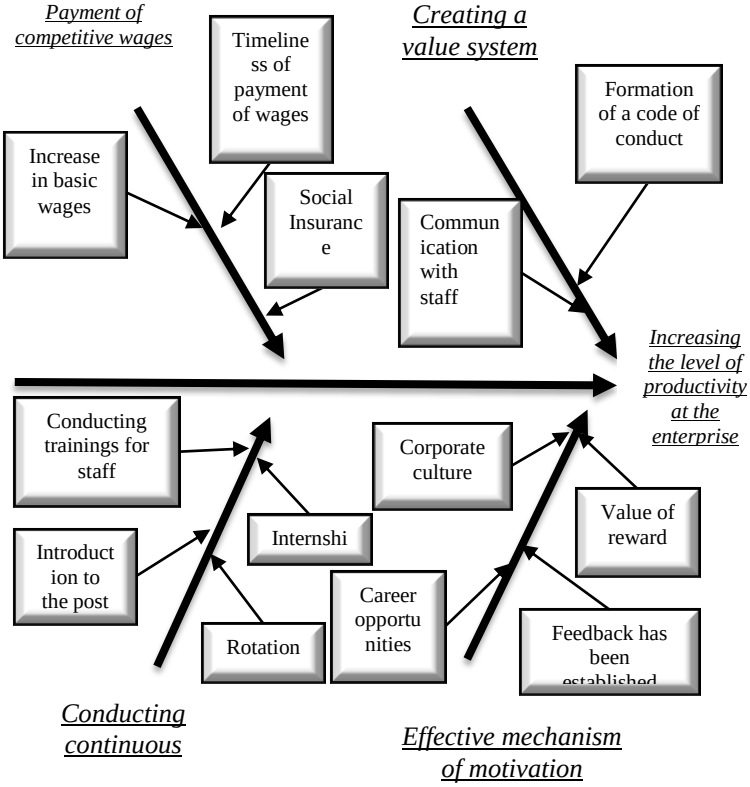

Fig. 3. Cause-and-effect diagram for improving productivity
Source: compiled by authors

At the same time, organizational support for the functioning and development of a value-oriented operating system requires compliance with the following principles: harmonization of interests of all subjects of relationships; systematic improvement; through partnership; social orientation of business. This will ensure continuous development of value creation, which will allow continuous improvement of the operating system parameters and development of the enterprise as a whole.

Business management is an integral part of its operation. Analysing recent publications and current trends, we have come to the conclusion that value orientation and flexibility have become the main components of modern project and program management. Therefore, the value category is one of the most important indicators that can objectively determine the feasibility of the management of the enterprise strategic decisions and to harmonize the interests of all participants in economic relations.

Values are an integral part of the power of management and knowledge, as they define everyday behaviour, ensure coherent interaction and give meaning to collective will when serving to resolve conflicts and make decisions about change, when stimulating development and making it much easier to cope with complex processes more creative than manuals. In conclusion, it cannot be denied that the existence and success of the organization depend largely on values such as creativity, initiative, energy, confidence, courage, willingness to take risks, flexibility and autonomy (psychological and financial), but we must not forget about other values, such as caring for the environment, sustainable consumption and use of natural resources, social, economic and environmental balance and development, rational use of resources.

It is for this reason that MBV declares the need to manage values and regard them as the most important resources that they undoubtedly are. Thus, value-based management means managing the culture of the company, strengthening it on a daily basis, and updating it, which prepares it for the unpredictable future. Both concepts are complex and multifaceted, but, nevertheless, their implementation at enterprises can solve current problems, ensure continuous improvement of operating system parameters, ensure

enterprise development as a whole, and promote reform concepts.

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GLOBAL CHALLENGES IN THE HUMAN CAPITAL FORMATION PROCESS (THE CASE OF GEORGIA)

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For Georgia, like for any other country, reproduction of human capital, which responds to the modern challenges of the innovative economy is the main condition for economic growth. High unemployment, which causes quite negative economic and social consequences in the daily life of any country, represents the most important barrier to full utilization of human capital. Therefore, the study of the state regulation of unemployment and the theoretical-methodological and practical issues of developing a system of measures for reducing unemployment and increasing employment in

the country is quite pressing[126]. It should be taken into consideration that firstly, the current state of human capital formation should be considered and the factors that prevent the existing human capitalfrom professional development and improving personal, behavioral features need to be identified. The analysis of the above problems allows us to find out the critical factors for the formation and implementation of the state strategy for human resource management.

Taking these factors into account will ensure the adaptation of the population to the market conditions and the difficulties and challenges accompanying the modern innovative and technological processes. This all will contribute to the rapid socio-economic development of the country.

Currently, a very unfavorable situation is observed in our country in terms of not only qualitative but also quantitative reproduction of human capital. First of all, this is evident from the decrease in the population. According to the population census of November 5, 2014, the number of the population of Georgia totaled 3,729,635 persons, which is 14.7% (641,900 persons) less compared to the data of the previous census of 2002 (4,371,535 persons). An irreversible trend in the quantitative reduction of the economically active population has been observed in recent years. In particular, as of 2006 economically active population amounted to 2,021.6 thousand. This figure dropped to 2,004.5 thousand in 2012 and to 2 thousand in 2019-1911. The number of the employed also decreased from 1,747.3 thousand in 2006 to 1,690.2 thousand in 2019. This extremely unfavorable process naturally reduces the potential for the country to develop and be fully involved in international integration processes. At present, the global economy is already a reality. This process has become even more visible due to Covid-19 pandemic. The pandemic is accompanied both by great threats and possibilities.

[126] Paresashvili, N.; Okruashvili, N.;. (2019). The Main Challenges of Higher Education System Management in Georgia. *Borders Without Borders: Systemic Frameworks and Their Applications for Sustainable Well- Being in the Global Era Age.* Pavia

New requirements for professional skills have emerged on the agenda[127].

Gradually, the globalization processes have had a stimulating effect on the process of fundamental changes in the world economy. Today, the everyday reality of the world shows that due to the influence of various factors, the interdependence of the countries around the world increases day by day and gains even wider scale. Regardless the borders, such interdependence includes political as well as economic and social interrelations. However, it should be noted that crossing national borders by organizations is more than just crossing a geographical line. This is also a huge step in another social, legal, political and economic environment, which is accompanied not only by the process of adaptation and self-assertion to a competitive environment, but also by the need of using modern approaches and principles in governing functions.

In the globalized world, where many organizations have to operate in several countries, the need for fundamental changes in the education system of the post-socialist countries arises. These changes greatly increase the demand for human resources and, therefore for intellectual capital. In the world of technological innovation, intellectual capital plays an important role in the dynamics of creating the value of an organization as it reflects the level and specific character of organizational development[128]. In the open innovation context intellectual property is considered not only as a source of costs for the creation and commercialization but also as an opportunity to generate additional income by alternative ways. That is, the shift towards open innovation allows for the considering intellectual property as a crucial asset that brings additional income to the company, as it provides for free access of external market players to the results of their own research and, conversely, the

127 Mikiashvili, N. (n.d.). Some issues of efficient management of the higher education system in small economies. (pp.258-261)

128 Paresashvili, Nino; Okruashvili, Nanuli;. (2017). Modern Problems To Form Human Capital In Georgia. International Scientific And Practical Conference World Science. 2, Issue 8, pp. 5-8

attraction of external inventions and other intellectual property to their own innovation process[129].

The scientific community unanimously agrees with the idea that human capital is the key factor that ensures long-term economic growth and innovative economic development of the country. However, unfortunately, understanding of this thesis and the concept of "human capital" in general is not enough for overcoming the difficulties and problems occurring in the process of reproduction of human capital. It is essential to identify the priority areas for the formation and development of human capital and to develop a set of specific measures focused on the innovative development of the country with a person equipped with his knowledge, qualification, innovative ideas and opportunities to implement them in the center .

Unemployment causes not only poverty for a large part of the population in any country, but it also leads to the spiritual, mental and moral degradation of the people; therefore, solving the problem of unemployment is one of the priority tasks of any civilized country. Although, according to the official statistics of the country, the unemployment rate fell from 17.2 percent in 2012 to 11.6 percent in 2019, extremely low wages and high rates of underemployment and hidden unemployment are the problems that are still widely spread in Georgia like in many transition economies. It is without doubt that the vast (if not absolute) majority of the self-employed are either underemployed or hidden unemployed. A high number of long-term unemployed people is particularly alarming. As it is clearly stated in the Universal Declaration of Human Rights, adopted in 1948, people have the right to work, to free choice of employment, to just and favorable conditions of work and to protection against unemployment. Unfortunately, the labor rights and opportunities of the able-bodied population, especially young people, are very limited in Georgia today, and the youth unemployment rate is high. Unfortunately, at present, decent labor rights and opportunities for

[129] Sobolieva, Tetiana, Lazarenko, Yiliia. (2019). Intellectual Property Management in the Shift Towards Open Innovation. Referential and Reviewed International Scientific-Analytical Journal of Ivane Javakhishvili Tbilisi State University "Economics and Business", Issue 2

able-bodied population, especially for the young population, is very limited, unemployment is high.[130] (Paresashvili, N.; Okruashvili, N.;, 2019).

In addition, employment is characterized by significant peculiarities in terms of gender[131] (Abesadze, N; Paresashvili, N;, 2018). Underdevelopment of the labor market infrastructure leads to the situation when people do not have the opportunity and/or do not know who and where to apply for the information they need, how to look for a job and how to develop professional skills. As a result, the share of the 'disappointed unemployed' - the people who want to work but are no longer actively looking for a job as they lost hope of finding it - is very high in Georgia. Due to long-term stagnation of the economy, lack of incentives for employment by the state and underdevelopment of the labor market infrastructure, unemployment in Georgia has taken the form of 'long-term unemployment' – almost two-third of the total unemployed (including the 'disappointed unemployed') are unemployed for a long time (for over one year). Bringing the long-term unemployed people back to the labor market and increasing their competitiveness requires additional efforts and finances from the state and employers. In such conditions, it is completely unacceptable to abolish targeted state programs for the training of the unemployed, especially since the economic capacities of private sector in this area are very insignificant.

We believe that the existence of a network of Employment Promotion Centers will significantly contribute to effective functioning of the labor market. The world experience proves that such centers present not only an effective institution for employment promotion (providing an effective connection between an employer and a job seeker, selecting a suitable job vacancy and offering a job to the employer) but they also create an information base for job

[130] Paresashvili, N.; Okruashvili, N.;. (2019). The Main Challenges of Higher Education System Management in Georgia. *Borders Without Borders: Systemic Frameworks and Their Applications for Sustainable Well- Being in the Global Era Age.* Pavia.

[131] Abesadze, N; Paresashvili, N;. (2018). Gender Aspects of Youth Employment in Georgia. *Ecoforum Journal*, pp. 481-488.

seekers (including the unemployed), promote professional orientation of job seekers in accordance with their abilities and labor market requirements through providing information and consulting services on labor market requirement, ensure the reduction of the imbalance between the demand and supply of labor by supporting the professional training of job seekers, represent an effective mechanism for regulating labor migration and supporting employment of the compatriots returning to their homeland and legal labor migrants, etc. In this regard, it should be noted that the budget (GEL 4 million) allocated for the State Employment Service for 2020 is very miserable and insufficient for addressing the important tasks that the State Employment Service faces in general and which are aggravated by modern challenges.

The modern world has become even more dynamic and at the same time more ruthless to the countries, which do not have developed or have underdeveloped mechanisms for effective sustainable growth in the fields of economy and politics. The signs of some progress in determining the essence of the human factors are substantiated in almost all the recent works of the management theorists. This is directly reflected in strengthening the attention by the management to the activation of the human factor while using physical as well as psychological and emotional potential of the employees, which means using not only their performance, but also their creative and organizational capabilities.

In terms of globalization, the process of managing organizations operating in different geographical areas is complicated by one more factor - each organization has its own unique culture, which distinguishes it from other organizations. While managing development, we cannot ignore the conflict situations[132], which might arise between employees with regard to various issues. Each organization establishes its own philosophy how to manage business and determines principles, value system, standards of behavior, ways to solve problems and decision-making tools, work atmosphere and creates the history of a company's

[132] Paresashvili, N;. (2018). A Conflict-Eternal and Inevitable Process of Society' s Development. Italy.

values. Although as the study has showed organizational culture is significantly influenced by the diversity of the workforce (e.g. gender, ethnic origin, orientation, race, age, some kind of disability, etc.), the most important of these factors affecting the culture is national factor and the society that carries the spiritual values and worldview of an individual. Taking national elements into consideration makes the organizational culture even more distinguished, original and able to coexist with the existing environment. Another important fact that the conducted studies have revealed is that employees and employers still do not fully recognize the importance of corporate culture in the organization[133] (Paresashvili, Nino, 2016), while the differences in cultural factors have clearly shown the modern world the variety of personal behaviour in crisis situations.

The government of Georgia considers that the future development of the country is linked with inclusive economic growth. Development of human resources and using the existing potential in the most effective way are the most important factors of inclusive economic growth. To achieve this goal, as it is indicated in the Social-economic Development Strategy of Georgia "GEORGIA 2020", it is essential to strengthen efforts directed towards developing workforce that meets labor market requirements as job creation and the full involvement of the country's workforce in comprehensive economic growth are much more effective at overcoming poverty than the simple provision of social assistance. According to the document of the government of Georgia "Country Basic Data and Directions for 2019-2022", a human being and caring for him/her is considered as a basic principle for the development of the country and it will remain the main value in future. Educated, motivated young people with entrepreneurial spirit and confident in their abilities will lead to the consequences that will turn Georgia into a developed and innovative economy.

[133] Paresashvili, Nino. (2016). Corporate Culture In Terms Of Labor Diversity., *International Conference „Smart and Efficient Economy: Preparation for the Future Innovative Economy*, pp. 321-327, Brno.

The reduction in the number of the able-bodied young people caused by immigration processes and other factors is particularly negatively reflected on the reproduction of the human capital in Georgia. Intensive migration of young people from the country is a very acute problem for the country. It is very regrettable that mostly young people aged 25-29 leave the country. The decline of this age group in the total population of the country is the greatest loss for the country, which is on the verge of depopulation. It is also remarkable that most of these people have higher education but abroad they mostly have jobs that are not connected with their specialties and perform low-skilled jobs. This leads to the decline in their qualification and non-competitiveness in the labour market in the long-run.

In 2017 a unified strategy for education and science (2017-2021) was adopted by the government of Georgia, which includes issues envisaged by the Association Agreement between Georgia and the European Union related to education, training, youth, science, research and technological development. The overall aim of the strategy is to develop a system that provides lifelong learning and equal access to quality education in order to prepare each individual for future life, promote employment, personal and professional development. Internships for young people are very important for establishing themselves in the labour market. The internship system for young people in Georgia is far from the system in the developed countries, known as the "getting revenue from the learning".[134]

We consider that for increasing competitiveness of the young specialists on the labour market it is necessary to organize youth professional training, retraining and professional development courses. In addition, it is important to establish a system of employment of the graduates, which will provide internship for the graduate students in various companies and organizations in order to better meet the labour market requirements (Paresashvili, N.; Okruashvili, N.;, 2019).

One of the specific goals of the strategy is to increase the number of professional students to support socio-economic

[134] Anthony P. Carnevale, N. S. (2015). *Price Learning While Earning: The New Normal.*

development of the country, ensure their competitiveness by developing professional and general skills. To achieve this goal, the following strategic objectives were defined: compliance of the vocational education with the requirements of the labour market and internationalization of the system; ensure access to vocational education based on the principle of lifelong learning; popularization of professional education and increase of attractiveness. It should be noted that in 2017 the actual performance of the state budget in the field of education amounted to GEL 36.5 million, while GEL 43.8 million was allocated for that purpose. GEL 43.8 million was allocated in the state budget of 2018 and GEL 48.7 million was allocated to fund vocational education in the country in 2019.

Although, there is some increase in public spending in this direction in the country, but, unfortunately, it does not fully meet the requirements of the knowledge-based economy. That is why, in our opinion, increase of the efforts by the state and focusing on quantitative and especially qualitative growth of human capital is essential.

Georgia has great potential for the development of several sectors. From this perspective, in our opinion, tourism and agriculture are quite important. We believe that development of these sectors along with others will significantly contribute to overcoming poverty. As noted above, Georgia's tourism potential is not doubtful, however, it is used only a verysmall part of it. In order to make real shifts to maximize the prospects of this potential, it isnecessary firstly to analyze the hindering factors that are obstacle for intensive and extensivedevelopment of tourism. Simultaneously with the social and demographic challenges, thediversity of the protected areas in Georgia leaves space for many different tourism marketingarrangements (info- and press-tours, presentations, organizing festivals, publishing new printedmaterials and improving the awareness of tourism infrastructure among target groups), whichmust be implemented on a regular basis. The tourism potential of Georgia in the internationalmarket is advertised in an irregular and

non-coordinated manner[135] (Paresashvili & Chitaladze, Main challenges of tourism development management in Georgia, 2019).

For the restoration of this sector along with other sectors in terms of pandemic threats, it is necessary to master the necessary and modern skills. It should be taken into account that Georgia has great potential to develop not only cultural, business and ski tourism, but many other types of tourism as well.

Accordingly, while developing labor market strategy, the system of priorities must be precisely defined, taking into account the vital interests of all the members of the society, special attention should be paid to the low-income citizens, distribution of public production results and the demand for justice. Selection of these priorities determines the social direction of the labor market regulation process, as well as the principles of labor market regulation and its specific methods (Paresashvili, Major Mechanisms to Develop the Strategies of the labour Market in Georgia, 2015) eveloping the professional orientation at the basic stage of education (at schools) following the labor market demands, and supporting the motivation of the applicants in the work activity with different professions and specialties. The measures to regulate the labor market may incorporate investing to support the economically expedient jobs and the similar. All the above-mentioned will promote the integration of the country's population with the international labor distribution process[136].

A healthy society is a guarantee of a strong state. However, for ensuring this, it is necessary for the state to take effective measures directed at the people belonging to all social strata. With the purpose to support young professionals and create decent living conditions for them, we consider it is desirable to develop the skills needed for entrepreneurial activities and "future employer" among young

[135] Paresashvili, N., & Chitaladze, K. (2019). Main challenges of tourism development management in Georgia. *37th International Scientific Conference On Economics And Sociadevelopment- "Socio Economic Problems Of Sustainable Development",* (pp. 1427-1433). Baku, Azerbaijan

[136] Paresashvili, N. (2015). Major Mechanisms to Develop the Strategies of the labour Market in Georgia. *ICEM-2015* (pp. 574-579). Kaunas: Elsevier.

people. For this purpose, special attention should be paid to the development of effective measures supporting (tax allowances, assistance in getting cheap loan, etc.) micro, small and medium-sized businesses[137] (Tugushi, 2018).

In this regard, it is very important to organize a business incubator with the broad involvement of governmental and international donor organizations. Along with the formation of entrepreneurial skills, it is very important to provide young people with starting conditions for their own business by providing cheap loans and tax benefits for a certain period of time, which will ensure sustainability and stability to the business initiated by young people (Paresashvili & Chitaladze, Main challenges of tourism development management in Georgia, 2019).

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[137] Tugushi, M. (2018). Unemployment change trends Georgia and its regulation directions. *Globalization and Business*, 151-160.

CONCEPTS OF THE BELARUSIAN FINANCIAL MARKET DEVELOPMENT IN THE CONTEXT OF MODERN TRANSFORMATIONAL TRENDS

Krupenko Yulia

Numerous research papers from both developed and developing countries have been devoted to the analysis of financial market development. This is due to the crucial role of financial markets in accumulating temporarily available financial resources to meet the economy's investment needs. It is an important scientific task to study the interaction between all segments of the financial market against the background of the ongoing financial crisis caused by the COVID-19 pandemic.

In this regard, it seems relevant to study the specification of tools for evaluating and analyzing the development of the national financial market from the standpoint of its competitiveness. It is impossible to overcome the limitations, challenges and threats facing the Belarusian financial system without a rational approach to analyzing the current state of financial markets and their segments.

The object of the research is the processes occurring in the financial market of the Republic of Belarus. The official statistical database consists of data from the Ministry of finance, the National bank of the Republic of Belarus, and the Belarusian association of insurers. Statistical databases of the IMF and the World Bank Group were used.

In the study the theoretical foundations of the financial market and the analysis of the financial market of the Republic of Belarus is carried out. The article offers mathematical methods for identifying the potential of the national financial market in the framework of ongoing integration processes. The problem zone of development of the financial market of the Republic of Belarus is revealed. It is the unbalance of all segments of the market. The prospects for the development of the insurance market of the Republic are determined. The proposals are based on the calculation of the Herfindahl − Hirschman index (HHI). Our proposals can serve as a basis for the program documents for the development of insurance in the Republic

of Belarus. All this will allow to fully realize the potential of the national financial market in the framework of ongoing integration processes.

The concept of financial markets.

Financial markets, like any market, provide the ability to deal with money, on the basis of supply and demand, through various financial instruments, "stocks and bonds", and those who need liquidity export and sell these instruments with a financial surplus, so that these tools meet their financial needs. This means that the financial market attracts and aggregates the savings of individuals and financial surpluses of (units with fiscal surplus) and makes them available to (units with fiscal deficits), such as companies that want to get money to develop their projects. So financial markets are a relatively integrated system that works to conclude financial transactions that create assets and liabilities and transfer ownership, and the more integrated this system becomes, the more the market develops and the more environmental it has (Fig. 1).

Figure 1. Mechanism for financial markets work
Source: Formed by author

Today there are different interpretations of the concept of financial market. Often experts determine the financial market as markets in which suppliers and demanders of funds trade financial assets, typically with the assistance of intermediaries such as securities brokers and dealers[138]. This approach identifies the financial market with the stock market of securities, which does not allow us to attribute to the financial market unorganized trading on the OTC market and other segments of the financial market.

[138] Gitman, L. J., Joehnk, M. D. Fundamentals of Investing, Global Edition. England: Pearson Education Limited. 2017. 772 p

The World Bank Group defines financial market as a money market and a capital market that differ in the urgency of financial instruments[139]. Often financial markets are defined as the mechanism through which units with a financial deficit (borrowers) meet with units with a financial surplus (lenders) so that each of them achieves its goal, which is either using the surplus money or borrowing money[140]. Also, financial markets can be defined as institutions concerned with investment affairs in securities from issuance and circulation. In this context, buying and selling of securities such as stocks and bonds and their operations bear returns and risks[141] .

Thus, most definitions of the financial market are based on either its distributive function as a mechanism for accumulating and moving funds, or on market objects (financial assets, services or instruments, money or capital). Understanding the financial market solely as a stock market is certainly too narrow. The vast majority of definitions, as you can see, significantly distorts the original purpose of the financial market. We are sure that it is primarily a market for financial resources, and the original macroeconomic value of the market is as a source of investment.

In our opinion, the following definition most comprehensively reflects the essence of the financial market: the financial market is a mechanism for creating, accumulating, evaluating, and redistributing financial resources that participate in economic reproduction. The financial market performs the function of transferring funds from those whose investment opportunities are limited to those who have such opportunities through financial intermediaries. Financial institutions are those institutions that operate in the financial market, providing different services for a wide range of stakeholder.

The emergence and development of the financial market

Although the financial markets were considered recent compared to other markets, but they have recently developed in

[139] The World bank glossary : Engl.-Sran. Span.-Engl. Washington : World bank, 1996. 426 p.

[140] Lasher ,William, Financial Management a Practical Approch , 5th Edition. Cambridge: University, USA. 2010. 784 p

[141] Voronov, V. S. Modern financial markets: monograph. / V. S. Voronov – Minsk: Prospekt, 2017. - 571 p.

terms of regulation and the possibilities available to their clients, due to the large financial investments that are exchanged in the market[142]. The origins of the financial markets date back to the Romans, who were the first to know the financial markets in the 15th century BC, and the Greeks also set up a trade-off shop in Athens As for the Stock exchanges, they appeared at the end of the thirteenth century AD, as they began migrating Italian commercial houses, and established colonies in one of the most famous cities and trade centers in the world at the time, namely the Belgian city of Bruges, which was kept until 1475, and after that stock exchanges were established in various countries The world, such as France, the Netherlands, Germany, etc.

The stages of market development were divided into:

1. The first stage was characterized by a relatively high level of living among individuals and the investment of their savings in commercial, agricultural and real estate projects, which led to this increase in commercial transactions and an increase in the size of projects, that became in need of large capital, and thus individuals became unable to finance them, so they resorted to borrowing From banks.

2. The second stage: began with the emergence of central banks, which control commercial banks, those that do their traditional work (discounting commercial papers and providing credit), in accordance with the controls of the Central Bank, which resulted in the identification of the loans they provide despite the increased demand for them.

3. The third stage : characterized by the emergence of specialized banks for medium and long-term lending, so they issued medium and long-term bonds to meet their needs of funds and financing various projects, and the Central Bank issue The treasury bonds.

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[142] Danilov, Yu. a. Experience of financial market reforms in Russia's competing countries on the global capital market: monograph. / Yu. a. Danilov-M.: Gaidar Institute Publishing house, 2016. - 160 p.

4. The four stage: was marked by the emergence of money markets. Therefore, the movement of financial and commercial securities and certificates of deposit in circulation increased, and this stage was considered the beginning of the merger between the financial and monetary markets.

5. The fifth stage: the monetary markets merged with the financial and then with the international markets, these mergers were the result of the development of different means of communication and the emergence of financial exchanges, this led to the interest of financial markets to buy and sell long-term securities[143] .

Types of financial markets

Financial markets are classified by specialists based on the functions and characteristics of those markets, and the diversity of financial markets is based on the diversity of the bases used in their tabulation and division, often around the following topics: maturity date, how to issue and place of trading. In general. Financial markets are divided into: money and capital markets[144][145] . Money market: is the market in which short-term financial instruments are traded, whose maturity date is often less than a year, and the aim is to provide liquidity, and is called the cash market because the financial assets in circulation can be converted into money quickly and easily[146][147]. In turn, it has components, as shown in Figure 2 below.

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[143] Hans, Genberg. The changing nature of financial intermediation and its implications for monetary policy [Electronic resource] // Bank for International Settlements – 2018. – Mode of access: https://www.bis.org/publ/bppdf/bispap39f.pdf. – Date of access: 20.03.2020.

[144] Teplyakova, N. A. Finance and financial market: answers to questions / N. A. Teplyakova. - Minsk: Tetralit, 2015. - 235 p.

[145] Kobrinsky, G. E. [et al.]. Finance and the financial market: textbook. the allowance / under the editorship of G. E. Kobrin. – Minsk: Higher school, 2014. - 347 p.

[146] Ross, LEVINE, Stock Markets: A Spur to Economic Growth / ROSS LEVINE // Finance & Development. –1996. – № 1(33). – P. 7-10.

[147] Schall, L. D. Introduction to financial management / L. D. Schall, C. W. Haley. – 6th ed. – New York: McGraw-Hill, 1991. – 894 p

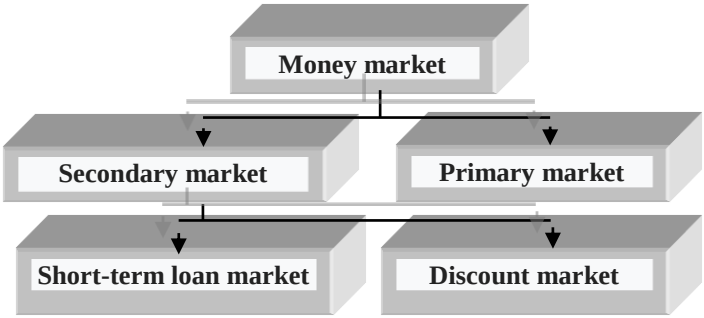

Figure 2. The components of the money market
Source: Formed by author

In the primary market, the funds to be invested for short-term periods are obtained at interest rates determined by the source of these funds and the borrower's standing and reputation. In the secondary market, short-term credit instruments are discounted, which in turn includes both the discount market and the short-term loan market[148].

Capital Markets: In these markets are dealt with long-term securities, i.e. borrowing and investing money for a period of more than one year, and characterized by high risk, in addition to the large volume of trades executed by traders in this market, this market is divided into: Future markets & spot markets[149].

Future markets: They are the markets that are dealt in the form of contracts that are executed in the future, meaning financial papers are bought now, but delivery after a period of time may extend to several months. And spot markets: they deal with long-term financial securities, and in turn, they may be primary markets in which securities are issued for the first time, secondary markets in which stocks, bonds and mortgage securities are dealt, and the last is divided into an organized market and an unregulated market[150].

[148] Bernard, JACQUILLA and Bruno, SOLNIK. Marchés Financiers : Gestion de Portefeuille et des Risques. – Paris: Dunod, 1997. – 452 p.
[149] Riad Dahel. Arab Stock Markets: Recent Trends and Performance. – Kuwait: The Arab Planning Institute The Arab Planning Institute, 2000. – 151 p.
150 Leroux, François. Marches internationaux des capitaux / Leroux, François. – 2th ed. – Montréal (Québec): Sainte-Foy (Québec), 1994. – 403 p

The following financial markets are distinguished by types of financial instruments (Fig. 3).

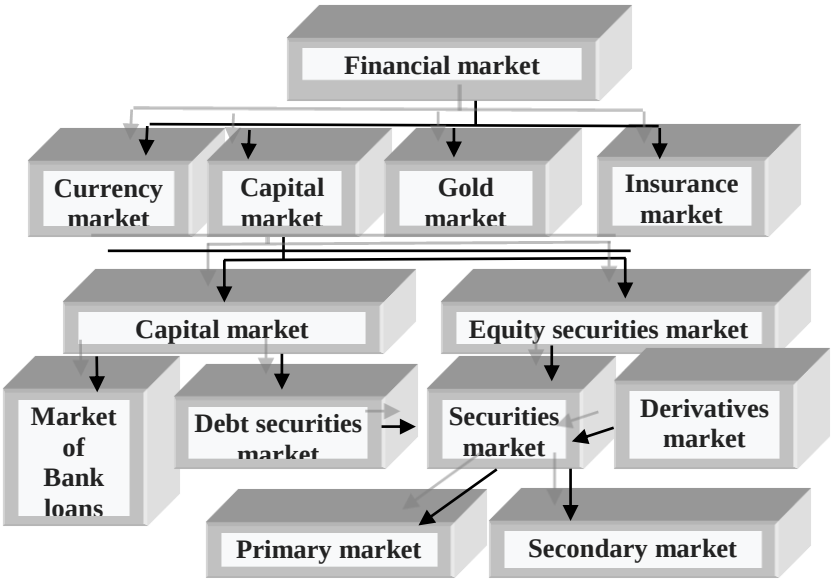

Figure 3. The components of the financial market distinguished by types of financial instruments

Source: Formed by author

Insurance market is a market where risk is transferred to a specialized company for a fee. Insurance reduces the social costs of possible risk. Insurer is an organization that takes on the risk of losses in the event of an insured event. Policyholder is a person who transfers the risk of losses and pays for this risk. Insured person is a person who is the object of insurance (the one who is insured). It may coincide with or differ from the policyholder (for example, when a company insures its employees against an accident at work). Types of insurance: property insurance, personal insurance, liability insurance. Pricing in the insurance market is based on determining the insurance rate, which will make it possible to cover losses in the event of an insured event, and pay administrative expenses. For this

purpose, great importance is given to calculating the probability of damage and the probability of occurrence of an insured event.

Financial market characteristics.

The securities market has some characteristics that distinguish it from other markets.

- It is more regulated than other financial markets, because its dealers are competent agents, and there are legal conditions and restrictions for trading securities in this market, so in most countries there are independent departments with powers to manage operations in the stock markets and provide Customers have the necessary information .
- The stock market requires a secondary market in which previously issued instruments are traded. To ensure liquidity. This is done through experienced financial intermediaries .
- It is characterized by flexibility and the ability to benefit from telecommunications technology, in which large and extended transactions are carried out that may extend to include many parts of the world at the same time.
- Trading in these markets requires the right climate, as well as full competition until fair prices are determined on the basis of supply and demand .
- Investing in the stock market requires the availability of market information and rational investment decision-making.

The securities market is also distinguished by its association with long-term securities, which gives it special importance in financing productive projects that need funds to be repaid in the long term[151]. In addition, investing in the stock market may be more risky and less liquid than investing in the cash market, as investment

[151] Merritt B. Fox, Lawrence R. Glosten, Edward F. Greene & Menesh S. Patel. Securities Market Issues for the 21. st. Century[Electronic resource] // Columbia Law School – 2018. – Mode of access: https://www.law.columbia.edu /sites/default/files/microsites/capital-markets/securities_market_issues_for_the_21st _century.pdf. – Date of access: 20.03.2020.

instruments such as long-term bonds, and equities have price-related risks, market-related matters, and various regulatory matters.

The role of financial markets in economic activity.

Financial markets play an important role in the lives of individuals and in various aspects of economic life, investment, savings and monetary policy in particular, contributing to the balance between surplus units (savers) and deficit units (investors), whether individuals or government institutions, and this role is extreme. So we can review the most important functions that characterize the financial markets as follows: motivate and direct savings; securities help obtain liquidity and credit; working to reduce investment risks; contribution to the implementation of monetary policies[152] .

Essentially, financial markets were found to satisfy the desires and needs of their dealers, and with the passage of time, it became a peremptory necessity necessitated by economic transactions between individuals and institutions because of its effective balance between the forces of supply and demand. The importance of stock exchanges becomes more important in countries that are characterized by freedom of the economy and in which the economy depends on individual and collective initiatives. The financial markets derive their importance from their existence and from their multifaceted role, as they are an unlimited act of action in the national economy, affecting various aspects and areas of economic activity, and at the same time affected by it. Financial markets play a crucial role in attracting unemployment surpluses based on unemployment and unpacked in the national economy, and converting them from idle capital into effective capital in the economic cycle, through investment operations made by individuals or companies through the use of stocks, bonds And instruments issued on the stock exchange. In addition, these markets provide real resources to finance projects by offering or reselling stocks or bonds[153].

[152] The role of financial markets for economic growth European Central Bank [Electronic resource] // European Central Bank – 2020. – Mode of access: https://www.ecb.europa.eu/press/key/date/2001/html/sp010531.en.htm. - Date of access: 20.03.2020.

[153] Lester V. Chandler. The economics of money and banking. London: Harper. 2000. 549 p

It is also a major tool to encourage economic development in countries and achieve a number of economic benefits, including the benefits of ownership, use, and the appropriate investment return. Stock exchanges are an incentive for listed companies in those markets to follow changes in their share prices and push them to improve their performance and increase their profitability, which leads to an improvement in the prices of these shares.

Belorussian financial market.

The financial market of the Republic of Belarus is regulated by the National Bank and the Ministry of Finance. While analyzing the financial market of the Republic of Belarus, the National Bank has decided to distinguish the banking sector; insurance sector; and other financial intermediaries. According to the analysis in 2015 the total assets of the financial sector of the Republic of Belarus amounted to 84.7 % of GDP, in 2016 - 107.5 % of GDP. In 2017, the ratio of total assets of the financial sector to GDP decreased slightly and amounted to 103.4 %[154]. The growth rate of the financial sector assets in 2018 accelerated by 13.6 % compared to 2017, while there was a more dynamic development of non-bank financial organizations, in particular leasing companies. The size of the total assets of the financial sector is not sufficient for the implementation of the goals and objectives provided for by the National strategy for sustainable development of the Republic of Belarus until 2030, so there is a need to find ways to attract resources to increase the total assets. Globalization processes allow participants of the financial market of the Republic of Belarus to attract and place financial resources in foreign financial markets.

In the structure of assets of the financial sector of the Republic of Belarus, the largest share is occupied by assets of banks and parabanking system – 80.9 %, the share of the insurance sector is 3.8% of total assets, leasing companies – 4.9 %. According to experts of the National Bank of the Republic of Belarus, "the accelerated growth of non-Bank financial sector reduces the degree of dominance of the banking sector and contributes to a more

[154] Financial stability in the Republic of Belarus: analytical review [Electronic resource]. / / NB RB. - 2018. - access Mode: http://www.nbrb.by/publications/finstabrep/finstab2018.pdf. - access date: 13.03.2020.

balanced financial market structure". So the most significant participant in the financial market of the Republic of Belarus are banks. At the same time, as noted in the Current strategy for the development of the financial market for the period up to 2020, "the dominance of the banking sector reduces competitive pressure and reduces incentives for its development"[155].

An important problem in the functioning of the banking sector is the concentration of assets in state owned banks. In the period 64.7% of the banking sector's assets were concentrated in state-owned banks of the Republic of Belarus, which detains the development of competition among banks. Many small banks do not have the ability to significantly increase the volume of active operations (in particular, credit, factoring) due to the lack of financial opportunities to compete with large state-owned banks, which mainly serve the main enterprises of the Republic of Belarus. Small private banks, as a rule, focus on servicing a limited group of legal entities and citizens, whose need for certain active operations may be limited (for example, small organizations are rarely interested in implementing project financing, there is no possibility of issuing bonds to purchase them by the Bank, etc.)

Banks are relatively slow to develop new forms of active operations (in particular, investing in securities), preferring traditional business lines (lending, etc.). The share of lending in the structure of assets of the banking sector of the Republic of Belarus is more than 50 %[156].

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[155] On the development Strategy of the financial market of the Republic of Belarus for the period up to 2020 [Electronic resource] // national Bank of the Republic of Belarus. - Minsk, 2017. - access Mode: http://www.nbrb.by/finsector/P229_6.pdf. – Date of access: 29.04.2018.

[156] Insurance market of the Republic of Belarus on January 1, 2019. [Electronic resource] // Belarusian Association of insurers. - 2019. - access Mode: http://www.belasin.by/page107.aspx. - access date: 12.03.2020. [Insurance market of the Republic of Belarus on January 1, 2019 [Electronic resource] / / Belarusian Association of insurers. – 2019. - Access mode: http://www.belasin.by/page107.aspx. - access date: 12.03.2020]Financial market infrastructures: Walking the line between stability and innovation [Electronic resource] / Swiss National Bank. –Mode of access: https://www.bis.org/review/r160930a.pdf. –Date of access: 02.05.2018http://www.nbrb.by/publications/finstabrep/finstab2018.pdf. – Дата

However, in our opinion, the structure of the Republic's financial sector is not balanced. There is a serious skew in the banking sector (for example, in the structure of the European financial market, the share of banking sector assets occupies an average of about 55.2 per cent over the past twenty years). European experience shows that the higher the level of welfare of a country, the more the economy is directed to the development of investment flows, maximizing the interests and needs of all economic entities. At the same time, financial markets are highly institutional and efficient, forming a single ecosystem and offering a diversified portfolio of financial services to entities.

The table 1 shows the structure of assets of the financial sector of the Republic of Belarus and Europe (01.01.2018).

Table 1 -The structure of assets of the financial sector of the Republic of Belarus and Europe (01.01.2018)

The structure of assets of the financial sector of the Republic of Belarus, at the beginning of 2018		European financial sector asset structure, at the beginning of 2018	
Sector	%	**Sector**	%
Banks and parabanking system	80,9	Banks and parabanking system	46
Insurance sector	3,8	Insurance sector	10
Leasing companies	4,9	Pension fund	3
Other financial intermediaries	10,4	Investment fund	15
		Other financial intermediaries	27

Source: Formed by author based on data from the national Bank of Belarus [17] and data from the national IMF[157].

доступа: 13.03.2020. [Financial stability in the Republic of Belarus: analytical review [Electronic resource]. // NB RB. - 2018. - Access mode: http://www.nbrb.by/publications/finstabrep/finstab2018.pdf. - access date: 13.03.2020]

[157] Financial stability: analytical review [Electronic resource]. / / IMF. - 2018. - access Mode: https://www.imf.org/en/Publications/CR/Issues/2018/07/19/Euro-Area-Policies-Financial-System-Stability-Assessment-46100. - access date: 13.03.2020.

An obvious problem in the development of the financial market of the Republic of Belarus is the uneven development of the banking and insurance sectors. In addition, both the financial market of the Republic of Belarus as a whole and its individual segments are characterized by Hyper-concentration with the dominance of state ownership.

In our opinion, the insurance sector has potential in the domestic financial market, which under certain conditions could become a powerful driver of development. Despite the active growth of insurance premiums in 2018 (by 14.6 %), the level of insurance penetration (the share of insurance premiums to GDP) remains extremely low – 1.01 %, having decreased by 0.01% compared to 2017. It should be noted that this figure is more than six times lower than the European average (6.7 % in 2018). Today, most economists agree that for the accuracy of calculations, it is necessary to base the GDP indicator on purchasing power parity (PPP) in international dollars (the IMF method), which allows reducing the impact on the calculations of changes in exchange rates and inflation. In this regard, we calculated the dynamics of the share of received insurance premiums to the GDP of the Republic of Belarus at purchasing power parity. As a result, it was revealed that the level of insurance penetration is significantly lower than the one set by the Republican program for the development of insurance activities for 2016-2020 and is only 0.312 % in 2018.

The most important indicator that characterizes the competitiveness of the insurance market abroad is the coefficient of concentration in the industry. It is recognized that the lower the concentration coefficient, the higher is the level of competition in the market. Conversely, a high concentration coefficient implies that there is monopolistic competition or oligopoly in the market. The value of this coefficient can be used by the state Supervisory authorities as an indicator of potential control over the prices of insurers. The current concentration of the insurance market of the Republic of Belarus, when the share of the five largest insurers accounts for more than 62% of premiums in the Republic, also does not contribute to the development of the market. Among the two

existing insurers that provide life insurance services, 75% of the contributions are made by the state company "Stravita". In the reinsurance sector the situation is even worse: the monopoly on the market is Belarus Re, which occupies more than 95 % of the market.

We propose to use the Herfindahl — Hirschman index (HHI) to analyze the concentration of the insurance market, which is an indicator of the level of market monopolization. It is defined as the sum of the squares of the market shares of the firms within the industry, where the market shares are expressed as fractions[158] [21]. The higher is the index value, the higher is the concentration of sellers in the market. The closer a market is to a monopoly, the higher the market's concentration (and the lower its competition).

A market with an HHI of less than 1,500 is considered to be a competitive marketplace, an HHI of 1,500 to 2,500 to be a moderately concentrated marketplace, and an HHI of 2,500 or greater to be a highly concentrated marketplace.

We calculated this index for the main segments of the insurance market of the Republic of Belarus (life/non-life insurance, by form of ownership of insurers) in dynamics for 2013-2018 (table 2).

Analysis of the table 2 shows that the insurance market of the Republic of Belarus is highly concentrated. The Herfindahl-Hirschman index averages more than 2,500 across all segments. The highest concentration is observed in the life insurance segment, where this indicator reached a record high of 7974.8 in 2015.

The life insurance segment was represented by four companies up to 2014: one state - owned company, Stravita, which is the market leader; three private companies, Pension guarantees, Seventh line, and Mega Polis (together they occupied about 30% of the market).

In 2015, three private insurers left the domestic life insurance market and were replaced by a foreign insurer with Austrian capital, Priorlife. However, the market structure was not significantly

[158] Pankov, D. A. Prospects for the development of the rating services market in the Eurasian economic Union / D. A. Pankov, Yu. V. Krupenko / / Belarusian economic journal.- 2019. - № 4. - P. 44-48

affected by the changes. So, "Stravita" still occupies a leading position (75 % of the market).

Table 2 - The Herfindahl — Hirschman index (HHI) for the main segments of the insurance market (2013-2018)

Evaluation segment	Period					
	2013	2014	2015	2016	2017	2018
HHI for insurance premiums received by all forms of insurance companies of the Republic of Belarus **for all types of insurance**	2465,8	2542,9	2662,0	2620,0	2557, 3	2487,9
HHI for insurance premiums received by all forms of insurance companies of the Republic of Belarus **for non-life insurance**	2771,9	2871,8	3036,8	3090,6	3089,8	2984,5
HHI for insurance premiums received by all forms of insurance companies of the Republic of Belarus **for life insurance**	5494,0	5745,6	7974,8	6253,6	6062,4	6566,0
HHI for insurance premiums received by **state insurance companies** of the Republic of Belarus **for all types of insurance**	3655,5	3816,2	3496,7	3477,4	3345,4	3215,4
HHI for insurance premiums received by **private insurance companies** of the Republic of Belarus **for all types of insurance**	1324,9	1071,7	1495,7	1321,1	1528,8	1527,0

Source: Formed by author based on the data contained in the annual reports of the Belarusian Association of insurers.

The life insurance segment was represented by four companies up to 2014: one state - owned company, Stravita, which is the market leader; three private companies, Pension guarantees, Seventh line, and Mega Polis (together they occupied about 30% of the market).

In 2015, three private insurers left the domestic life insurance market and were replaced by a foreign insurer with Austrian capital, Priorlife. However, the market structure was not significantly affected by the changes. So, "Stravita" still occupies a leading position (75 % of the market).

We can see that the lowest concentration is observed among private insurers. However, further analysis revealed that it was among private insurers that the most noticeable changes occurred – the reduction of companies in the Belarusian market was due to this group of participants.

In a detailed analysis of the national insurance market, it seems appropriate to calculate the Herfindahl − Hirschman index by each type of insurance, which will reveal the degree of concentration for each individual type of insurance. Thus, in our opinion, this indicator is very informative and allows us to identify problems of competitiveness of national markets in the context of integration processes.

The current model of the Byelorussian insurance market has no opportunities for its growth. The concentration of insurance companies eventually leads to a lack of competition in the industry and thus reduces the quality of services provided. These conclusions are confirmed by the most important macroeconomic indicators of market development.

Conclusions and prospects for further development in this direction.

The study of the peculiarities of the functioning of insurance in the Republic of Belarus shows that the domestic insurance market has sufficient prerequisites for its sustainable development, despite the existing low share of the level of penetration of insurance in the economy. In this regard, the calculations using the new analytical tools will help to create preconditions for growth of the insurance market of the Republic of Belarus will allow to define priorities of its development. What are common features of these exchanges is that they are small markets. Suffer from high concentration; weak opportunity for diversification; the dominance of state property.

So, In order to develop the market and support the economy, it is necessary to expand the range of markets with offering types of

insurance and to communicate with the private insurance companies. The national insurance market of the Republic of Belarus needs an injection of foreign capital in addition to working to impose administrative and financial independence in these sector of the financial market.

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FOREIGN EXPERIENCE IN REFORMING THE HEALTH CARE SYSTEM

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Introduction

The issue of forming a national model of the health care system remains relevant. The beginning of the second stage of the reform took place despite numerous scientific publications, which substantiated objective reservations about the conceptual provisions of health care reform.

Already in the first month of implementation of the second stage, the Minister of Health of Ukraine Stepanov M.V. acknowledged the existence of significant problems with the financing of the industry[159].

In particular, he noted that "... due to insufficient funding, in addition to emergency medical care, there was also an anti-tuberculosis service, psychiatric hospitals, and highly specialized medical areas".

It is noteworthy that the Minister does not pay attention to the internal contradictions of the essence of medical reform, and instructs the health departments of regional state administrations to inform about the plans, the optimization, as well as their vision of financing medical institutions. This order contains, in our opinion, two significant internal contradictions, which are, in fact, not in the plane of medical reform. Plans to optimize the network of medical institutions come from two factors: first, administrative-territorial reform (creation of united territorial communities - UTC) and, as a

[159] Максим Степанов признал проблемы с финансированием здравоохранения из-за начала второго этапа реформы / Укррудпром Електронний ресурс Режим доступу – http://ukrrudprom.com/news/Maksim_Stepanov_priznal_problemi_s_finansirovaniem_zdravoohorane.html

consequence, a radical change in intergovernmental relations, and, secondly, changes in the principles of financing both primary and secondary levels of medical services. The question of the vision of the financing of medical institutions objectively does not find an addressee among the leaders of the medical industry on the ground. When forming a viable united territorial community, it is necessary to clarify these issues. But civil servants did not do that. The apologists for administrative-territorial reform, unfortunately, did not take into account the category - the economic potential of administrative systems.

Scientists and practitioners of the medical industry have warned about possible problems not only of funding but also of a significant reduction in the quality of medical services, structural gaps in the system of relations between primary and secondary levels of health care. In particular, the guidelines[160] explicitly stated that "Due to the transition of UTC ... to direct inter-budgetary relations with the state budget, there are significant risks of even greater fragmentation of financial resources with all the associated consequences. They can lead not only to a deterioration in the management of financial resources in health care, but, as a consequence, a further decline in the integrative function with reduced efficiency of primary health care, impaired equity of funding, accessibility, manageability, prevention, standardization and evidence of primary care, which form the basis of the quality of medical services".

In basic research[161] the authors, at the system level, explore the prerequisites for effective "... development of the social sphere in terms of administrative and financial decentralization", highlight the organizational and institutional features of optimizing the network of

[160] Формування мережі закладів охорони здоров'я об'єднаної територіальної громади.Бібліотека головного лікаря та голови профкому закладу охорони здоров'я. Випуск -11. Львів –2016. Режим доступу – http://sm.gov.ua/images/docs/2017/medicina_otg.pdf

[161] Розвиток соціальної сфери територіальних громад в умовах адміністративно-фінансової децентралізації / ДУ «Інститут регіональних досліджень імені М.І. Долішнього НАН України» ; за ред. С. Л. Шульц. – Львів, 2018. – 140 с. (Серія «Проблеми регіонального розвитку»). Режим доступу – http://ird.gov.ua/irdp/p20180101.pdf.

social infrastructure and their financial security at the community level.

It is becoming increasingly clear that we need to analyze the health care system as an institution (Vakhramieieva N.L., 2006)[162] based on the principles of complementarity of social and economic development (Kolhun V.S., 2006 and Borodina O.S., 2014)[163][164][165]. Such an analysis is extremely important given the complex changes in the administrative-territorial structure of Ukraine, as well as in the corresponding structural changes in the health care system.

In terms of implementing methods of analysis, the results of the article deserve attention[166]. The author reveals the contradiction between the general vector of the strategy of decentralization of functions and powers of public administration and the declared goals and the proposed hierarchical structure of the health care system. She proved that some of the proposed new institutions in the process of decentralization in health care and existing institutions are not complementary.

A number of recent dissertation studies suggest that the basis of medical reform is a systematic approach to administrative-

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[162] Вахрамеева Н.Л. Актуальность построения и основные параметры регионального института здравоохранения // Вестник Омского Университета. Серия «Экономика», 2006. – №1. – С. 92-98. Режим доступу – https://cyberleninka.ru/article/n/aktualnost-postroeniya-i-osnovnye-parametry-modeli-regionalnogo-instituta-zdravoohraneniya

[163] Колтун В. С. Комплементарність яек парадигма місцевого самоврядування: методологічний аспект // Інвестиції: практика та досвід. 2015. – № 4. – С. 104-108: Режим доступу – http://www.investplan.com.ua/pdf/4_2015/22.pdf

[164] Бородіна О.С Комплементарність соціального та економічного розвитку: науково-прикладний аспект // Український соціум. 2014. – №4 (51). – С. 96-103: Режим доступу – https://ukr-socium.org.ua/wp-content/uploads/2014/10/96-103__no-4__vol-51__2014__UKR.pdf

[165] Бородіна О.С., Принцип комплементарності в міждисциплінарних дослідженнях економіки // Економіка і прогнозування. 2015. – № 2. – С. 47-58: Режим доступу – http://irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?C21COM=2&I21DBN=UJRN&P21DBN=UJRN&IMAGE_FILE_DOWNLOAD=1&Image_file_name=PDF/econprog_2015_2_6.pdf

[166] Степанова О.В. Проблеми інституційної комплементарності процесів децентралізації системи охорони здоров'я України // Інвестиції: практика та досвід, 2016. – № 12. – С. 42-48. Режим доступу – http://www.investplan.com.ua/?op=1&z=5054&i=7

territorial reform, decentralization, and the unification of territorial communities. In this case, we consider the provision of medical services as the only end-to-end function. Thus, in particular, in the dissertation research[167], the author substantiated the theoretical and methodological principles of determining the mechanisms of public administration, which determine the systemic changes in the field of health care in Ukraine in terms of reforming the industry.

The authors (Shevchuk V.V., 2017 and Rusniak V.A., 2017) study the issues of improving the state regulation of innovative development and scientific support of health care reform in dissertations[168][169].

The authors (Machuha N.Z., 2016) present the fundamental scientific results on the organizational and economic support of the functioning of the formation of the system of medical services in Ukraine in the dissertation research[170].

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[167] Вовк С.М. Механізм державного управління системними змінами у сфері охорони здоров'я / Дисертація на здобуття наукового ступеня доктора наук з державного управління / Донецький державний університет управління Маріуполь, 2019. - 492 с. Режим доступу – https://dsum.edu.ua/wp-content/uploads/2019/06/dis_1verd-7_2.1_2.pdf

[168] Шевчук В.В. Удосконалення державного регулювання інноваційного розвитку системи охорони здоров'я України / Дисертація на здобуття наукового ступеня кандидата наук з державного управління / Чорноморський національний університет імені Петра Могили Миколаїв – 2017, 219 с. Режим доступу – https://chmnu.edu.ua/wp-content/uploads/2016/04/Disertatsiya_Shevchuk_Viktoriyi_Viktorivni.pdf

[169] Русняк В. А. Медико-соціальне обгрунтування функціонально-організаційної моделі наукового забезпечення реформи охорони здоров'я в Україні / Дисертація на здобуття наукового ступеня кандидата медичних наук (доктора філософії) ДУ «Український інститут стратегічних досліджень МОЗ України», Харківський національний медичний університет МОЗ України Київ–2017 235 с. Режим доступу – http://www.knmu.kharkov.ua/index.php?option=com_content&view=article&id=4528%3A2017-10-05-08-03-13&catid=59%3A-6460006&Itemid=80&lang=uk

[170] Мачуга Н.З. Теорія і методологія функціонування системи надання медичних послуг в Україні / Автореферат дисертації на здобуття наукового ступеня доктора економічних наук. /Інститут проблем ринку та економіко-екологічних досліджень НАН України Одеса 2016, 38 с. Режим доступу – http://www.impeer.in.ua

Based on the analysis of the problem in the field of health care Nadtochii A.O. proposed organizational and economic principles for reforming its management system[171].

At the same time, despite the significant theoretical and methodological achievements of domestic scientists, their results are not yet sufficiently implemented in the practice of reforming the medical field. These circumstances actualize the task of the further systematic study of the principles and methods of reforming the medical sector in different countries, identifying national characteristics, and further improving public policy.

Task setting

The purpose of the research is a systematic analysis of foreign experience in reforming the health care system, in particular the essence of the system model, form of government, management structure, principles of management, sources of funding, principles, and methods of financing, resource provision and identification of positive and negative aspects of the system. We consider the results of the analysis as an information basis for institutional changes in the national system "administrative-territorial structure - the end-to-end function of health care - the levels of health care - the economic potential of administrative systems - funding".

Results

Consider the experience of countries that have achieved success and belong to different models of health care systems (public - Beveridge and its variety - Semashko, insurance - Bismarck, private). We will analyze the following main indicators of the organization of health care: budget-insurance and private models of financing the health care system, the form of management, organization of medical services, management structure (Table 1).

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[171] Надточій А.О. Напрями реформування організаційно-економічного механізму функціонування системи охорони здоров'я в Україні // Теорія та практика державного управління, 2013. – Вип. 4 (43) с. 1-9 Режим доступу – http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?I21DBN=LINK&P21DBN=UJRN&Z21ID=&S21REF=10&S21CNR=20&S21STN=1&S21FMT=ASP_meta&C21COM=S&2_S21P03=FILA=&2_S21STR=Tpdu_2013_4_26

Table 1 – Experience of leading countries with developed market economies in the organization of the health care system

Indicator	Great Britain	USA	France
System model	Beveridge budget system	Private model	Social insurance medicine
Cost recovery	The state budget covers 85% of health care expenditures	Private health insurance covers 50% of costs	Insurance premiums cover 50% of expenses, 20% - private health insurance, 10% - budget expenses, 20% - personal budget of citizens
Form of management	Centralized management	Decentralized management	Decentralized management
Provision of services	State treatment and prevention facilities provide most medical services. Family doctors of private practice provide primary health care.	Private non-commercial hospital care is 50% of the bed stock, private commercial - 15% of the bed stock, and public - 15% of the bed stock. Doctors provide services through private offices.	State treatment and prevention facilities provide medical services. Also widespread are private medical practices, family doctors of private practice.
Management structure	National Health Service, 10 strategic health authorities for management in regional offices	Ministry of Health and Social Services. Two subdivisions - Public Health Service and Health Care Financing Department. Service centers.	Social Health Insurance Fund. Private non-profit general health insurance funds.

Cont. Table 1

Healthcare costs	9.8% of GDP	17.1% of GDP	11.5% of GDP
Lifetime	80,8 years	78,6 years	81,7 years
Conclusions	Free services cover a large part of the population. Solving strategic problems with high efficiency. The need for significant expenditures from the state budget to support the operation. State monopoly in the provision of services.	Branching of medical institutions. High quality of services with a high level of wages. Lack of a unified distribution system. Insufficient level of availability of medical services. The most expensive among all the presented models.	Flexibility in the accumulation and distribution of financial resources due to less dependence on public funding. Clear division of functions and powers. Structured distribution of funds. Requires more maintenance and operation costs. The presence of queues for services.

Source: Formed by authors taking into account[172]:

Analysis of the Table gives grounds to claim that there is no single universal model of the health care system. Each model has its strengths and opportunities for improvement. In this case, each model can function effectively in specific given conditions. However, the study showed that the budget model requires significant expenditures from the state budget. In countries with low GDP, it is better to use other models.

The state budget spends the most on health care in countries such as the Marshall Islands, the United States, Switzerland, and the least on China, Romania, and Monaco. Ukraine with health care

[172] Tanner, M. (2008) The Grass Is Not Always Greener: A Look at National Health Care Systems around the World. Cato Policy Analysis Paper No. 613. http://dx.doi.org/10.2139/ssrn.1262978 Retrieved from https://www.cato.org/sites/cato.org/files/pubs/pdf/pa-613.pdf)

expenditures of 6.7% of GDP in this ranking ranks 81st out of 187 countries (Fig. 1).

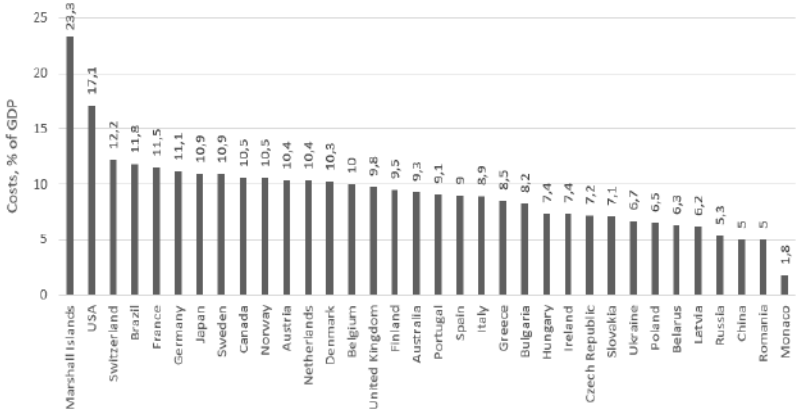

Figure 1. Health expenditures in different countries (% of GDP)
Source: https://www.who.int/health-accounts/en/

Health care costs are not the only and most comprehensive indicator of the effectiveness of a system. Rising health care spending as a percentage of GDP could create a state budget deficit and pose a threat to the country's socio-economic development as a whole. Rising health care costs may also be the result of an increased tax burden. Therefore, this indicator, in our opinion, should reflect not only quantitative growth but also qualitative improvement. A separate area is the efficient use of limited resources.

Optimizing health care spending is a major challenge facing post-socialist countries at the beginning of the reform. The results for many countries have been reduced life expectancy, reduced funding for the industry, and, as a result, obsolete equipment, inefficient wages, and deteriorating service delivery. All this has led to the urgent need to reform the health sector.

We propose a logical and structural scheme of the process of improving the health care system for the conditions of Ukraine (Fig. 2).

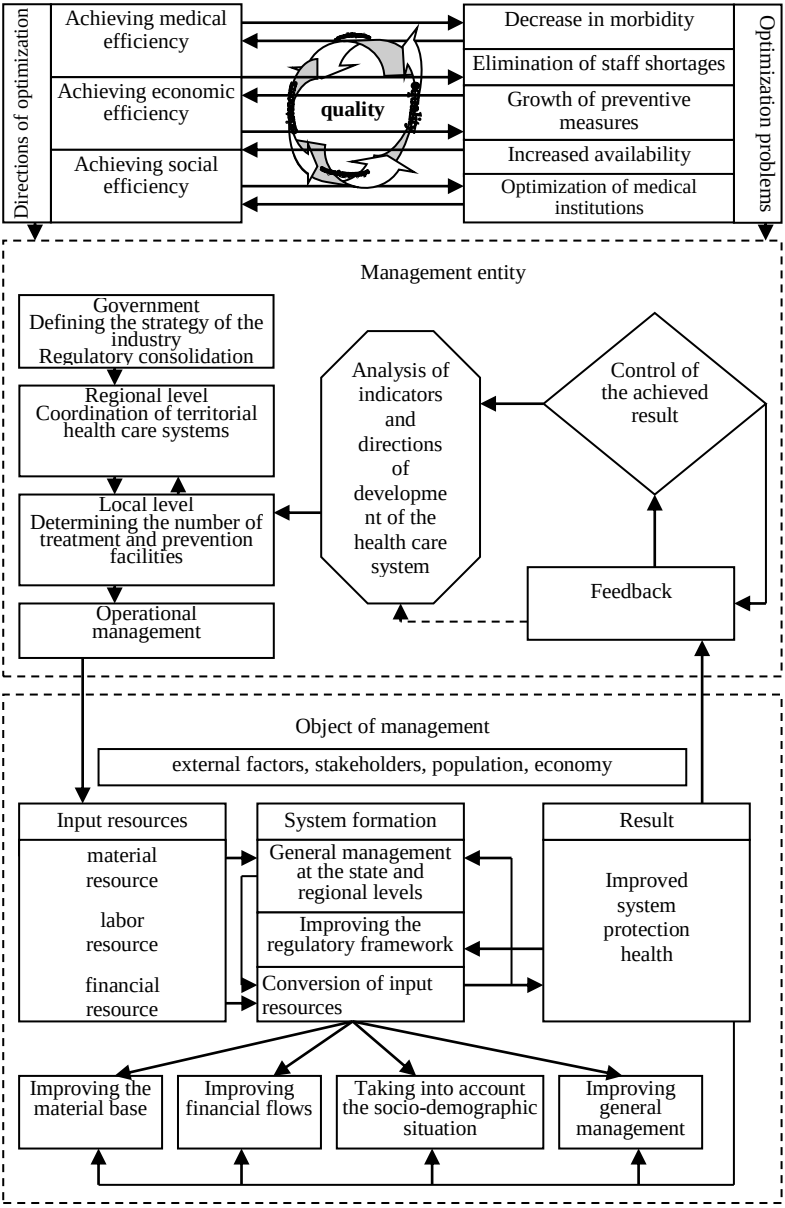

Figure 2. The relationship between the functions of the process of improving the health care system

The superstructure of the system is the general principles of optimization of the health care system (accessibility, acceptability, equality, availability, and quality), the formation of optimization directions, and the definition of the main objectives of achieving the goals.

The element of the system "subject of management" includes sub-elements of forecasting the development of the system and the system, planning the development of the system, defining the main tasks and functions, making decisions based on factors and analysis of possible effects, and general regulation of the improved system.

The system element "object of management" characterizes the internal development of the system and includes the overall process of transforming the input resources of the system (logistics, labor, and financial support of the system) on the basis of general guidance at the state and regional levels, functioning of the system (improvement of the health care system).

The feedback mechanism provides analysis and evaluation of the achievement of the result, the possibility of further improvement, and, if necessary, adjustment of the planned goals and objectives.

Conclusions

The proposed relationship between the functions of the health care improvement process differs significantly from the current reform strategy. It is necessary to proceed from the postulate of interdependence and interdependence of tasks and directions of optimization of the health care system. Such optimization should take place solely to ensure the medical, economic, and social efficiency of the functioning of both individual regions and the country as a whole. The resource and financial base of the health care system is economic development. As a derivative of the planned implementation of optimization tasks: reducing morbidity, eliminating the shortage of medical staff, increasing the number and quality of preventive measures, increasing the availability of medical services. The specific task of optimizing the chain of medical institutions, however, should be only a tool to achieve the above. This is the principle of complementarity of medical, organizational, and economic components of social development.

The unit "transformation of input resources" should be common to manage the socio-economic development of the state and the region. It naturally belongs to the institutional level and perceives the block "advanced system".

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CHAPTER 4. GLOBAL TRENDS IN MANAGEMENT EDUCATION AND ORGANIZATIONAL CULTURE TRANSFORMATIONS

CROSS-CULTURAL MANAGEMENT IN A GLOBALIZED BUSINESS ENVIRONMENT

Denys Lifintsev
Carmen Nastase
Karina Sarkisyan-Dikova

Every year business environment becomes globalized further more. Digitalization and growing impact of new generations foster such processes. It becomes incredibly simple to "operate globally" producing or reselling goods and services from almost any spot on our planet. In 20th century cross-cultural communication competence used to be a privilege of political leaders and multinational corporations managers while nowadays such skills are essential for millions of people all over the world.

Indeed, when finance, goods, services and information flows are so fast and simple more professionals work in multicultural environment. Digitalization also provided access to global markets to small and medium enterprises and individuals. Digital platforms, social media, online payment systems facilitated all business processes[173] (McKinsey report, 2016).

In a globalized business environment cultural diversity is treated as a competitive advantage[174] (Luo, 2016), an opportunity to

[173] McKinsey Global Institute (MGI). McKinsey & Company. (2016). Digital Globalization: The New Era of Global Flows. Available at: http://www.mckinsey.com/business-functions/mckinseydigital/our-insights/digital-globalization-the-new-era-of-global-flows

[174] Luo, Y. (2016) Toward a reverse adaptation view in cross-cultural management, Cross Cultural & Strategic Management Vol. 23, No1, 2016, pp. 29-41

find original solutions[175] (Hoecklin, 1995) because the heterogeneity of cultures of team members representing different nations can improve their performance if cultural diversity is properly used[176] (Shachaf, 2008) and to negotiate successfully across cultures[177] (Søderberg and Romani, 2017).

Factors mentioned above foster the interest to cross-cultural issues in business and management. One of the most prominent researchers in this field - N. Adler - noted that cross-cultural management is pointed to describe and compare organizational behavior in different cultures seeking to improve the interaction between co-workers, partners, clients, managers etc. from different countries or cultures[178] [179](Adler, 1983, 1991).

Geert Hofstede's model of national culture based on his fundamental study of value orientation in different cultures[180] (Hofstede, 1980) is still the most popular and influential one in the field of cross-cultural management. It examines the dominant core values in the countries it has targeted, and the influence of these values on the behavior of individuals in companies[181] (Nastase, 2017). A team of researchers united by Geert Hofstede formulated six basic dimensions of culture:

- power distance (the degree to which the less powerful members of a society accept that power is distributed unequally);

[175] Hoecklin, L. (1995) Managing Cultural Differences: Strategies for Competitive Advantage. London: Economist Intelligence Unit/Addison Wesley

[176] Shachaf, P. (2008). Cultural diversity and information and information technology impacts on global virtual teams: An exploratory study. Information & Management, 45(2), 131-142, http:// dx.doi.org/10.1016/j.im.2007.12.003

[177] Søderberg, A. M., Romani L. (2017). Boundary spanners in global partnerships: A case study of an Indian vendor's collaboration with western clients. Group & Organization Management, 42 (2), 237–278.

[178] Adler, N. (1983) Cross-Cultural Management: Issues to Be Faced, International Studies of Management & Organization, 13:1-2, 7-45, DOI: 10.1080/00208825.1983.11656357

[179] Adler, N. (1991) International dimensions of organizational behaviour. Boston, MA: PWS-Kent Publishing Company

[180] Hofstede, G. (1980) Culture's Consequences: International Differences in Work-related Values. Beverly Hills, CA: Sage.

[181] Nastase C., Aitaleb Z., Morosan Danila L., (2017), Cultural similarities in service of the cross-border cooperation between Ukraine and Romania,

- individualism / collectivism (distinguishes cultures where people are more concerned on personal goals and achievements from the cultures where people prefer team-work and collective responsibility);
- masculinity / femininity (domination of traditional "male" or "female" values in different national cultures);
- uncertainty avoidance (illustrates how comfortable the society's members feel in situations of uncertainty);
- long-term orientation / short-term orientation (how "long-term oriented" the society' members are);
- indulgence / restraint (illustrates how important the rules are for the society's members).

The relative positions on these dimensions are expressed in a score on a 0 to 100 point scale[182] (the official G. Hofstede centre website, 2020).

The idea of setting "the scores" for countries became incredibly popular and it significantly simplified the understanding of basic assumptions regarding national cultural peculiarities. G. Hofsede's theory was fairly criticized[183] for "over-generalizations" (McSweeney, 2002), but is is still playing a monumental role in cross-cultural studies. Indeed, we should realize that any national culture is actually a mix of numerous sub-cultures (e.g., people living in the Italian North have different culture from those living in the South, IT-professionals' behavior is different from the behavior of high-school teachers, Generation Z representatives are different from the Baby Boomers etc), so it is very difficult to shape a picture of a culture of a specific country or nation.

Measurement of culture through cultural dimensions is still widespread[184] (Taras et al., 2009) and probably most fundamental

[182] The official site of G. Hofstede centre (2018), available at: https://www.geert-hofstede.com (Accessed 2018)

[183] McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: A triumph of faith - a failure of analysis. Human Relations, 55(1), 89-118.

[184] Taras, V., J. Rowney, and P. Steel (2009). Half a Century of Measuring Culture: Review of Approaches, Challenges, and Limitations Based on the Analysis of 121

and popular study is The Global Leadership and Organizational Behavior Effectiveness (GLOBE) research program which findings illustrate the importance of culture for organizational and leadership effectiveness[185] (House et al., 2004).

Another amazing practical guide providing useful information for cross-cultural management and communication with partners or clients from abroad is "The country mapping" tool based on Erin Meyer's book "The culture map".

E. Meyer's approach combines several existing theories and enriches them with important methodical and practical issues. It includes eight cultural dimensions[186] (Meyer, 2014):

- Communicating: low context vs. high context
- Evaluating: direct negative feedback vs. indirect negative feedback
- Leading: egalitarian vs. hierarchical
- Deciding: consensual vs. top down
- Trusting: task vs. relationship
- Disagreeing: confrontational vs. avoid confrontation
- Scheduling: linear-time vs. flexible-time
- Persuading: concept-first vs. application-first

Working in such complex, multicultural environment demands a set of specific skills from managers and professionals which can be defined as cultural intelligence (CQ) - "an individual's capability to function and manage effectively in culturally diverse situations and settings"[187] (Ott & Michailova, 2018). CQ helps overcoming most widespread obstacles for effective cross-cultural interaction such as language barriers, differences in values and standards of behavior,

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Instruments for Quantifying Culture. Journal of International Management 15 (4):357–73. doi:10.1016/j.intman.2008.08.00

[185] House, R., P. Hanges, M. Javidan, and V. Gupta (2004). Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies. Thousand Oaks, CA: Sage.

[186] Meyer, E. (2014). The culture map: Breaking through the invisible boundaries of global business. Public Affairs.

[187] Ott, D. L., & Michailova, S. (2018). Cultural intelligence: A review and new research avenues. International Journal of Management Reviews, 20(1), 99-119.

stereotypical thinking and ethnocentrism, lack of experience, lack of trust[188] (Lifintsev & Canavilhas, 2017).

Due to the growing pace of globalization and digitalization cross-cultural management concept (Fig. 1) becomes more popular and widespread.

The results of our previous research prove that digitalization and growing influence of new generations (Millennials and especially Generation Z) foster the number of cross-cultural interactions. Digital technologies simplify the process of communication between people from different countries even helping to soften the problem of language barriers (Lifintsev & Wellbrock, 2019).

At the same time, Generation Z representatives (Gen Zers) are open for new opportunities in global business environment. They believe that cross-cultural communication skills are very important for personal and business issues. However, most of the main authors on this field recognized the importance of the culture in the motivation process, sources and consequences, and yet, they did not demonstrate what specific elements of the motivational process vary from a culture to another (Nastase, 2018). These young men and women are motivated to work in a multicultural environment and it can even give them additional motivation (Lifintsev, Fleseriu and Wellbrock, 2019).

However, the main motivation for the Gen Zers to work in a globalized business environment is an opportunity to earn more money comparing to local businesses as well an opportunity to travel the world while language barriers and stereotype thinking (about other cultures) remain most important obstacle even for this generation (Table 1).

It is important to mention that "opportunity to travel the world" was considered as an important motivation factor by the Gen Zers from the countries with quite different economic situation, and

[188] Lifintsev, D. (2017). Cross-cultural management: obstacles for effective cooperation in multicultural environment / D. S. Lifintsev, J. Canavilhas // Scientific bulletin of Polissia. – 2017. - № 2 (10). P. 2. – pp. 195-202. DOI: 10.25140/2410-9576-2017-2-2(10)-195-202

in particular – with different living standards (the research was conducted in Germany, Romania and Ukraine), which proves the importance of cross-cultural interaction itself for the young women and men.

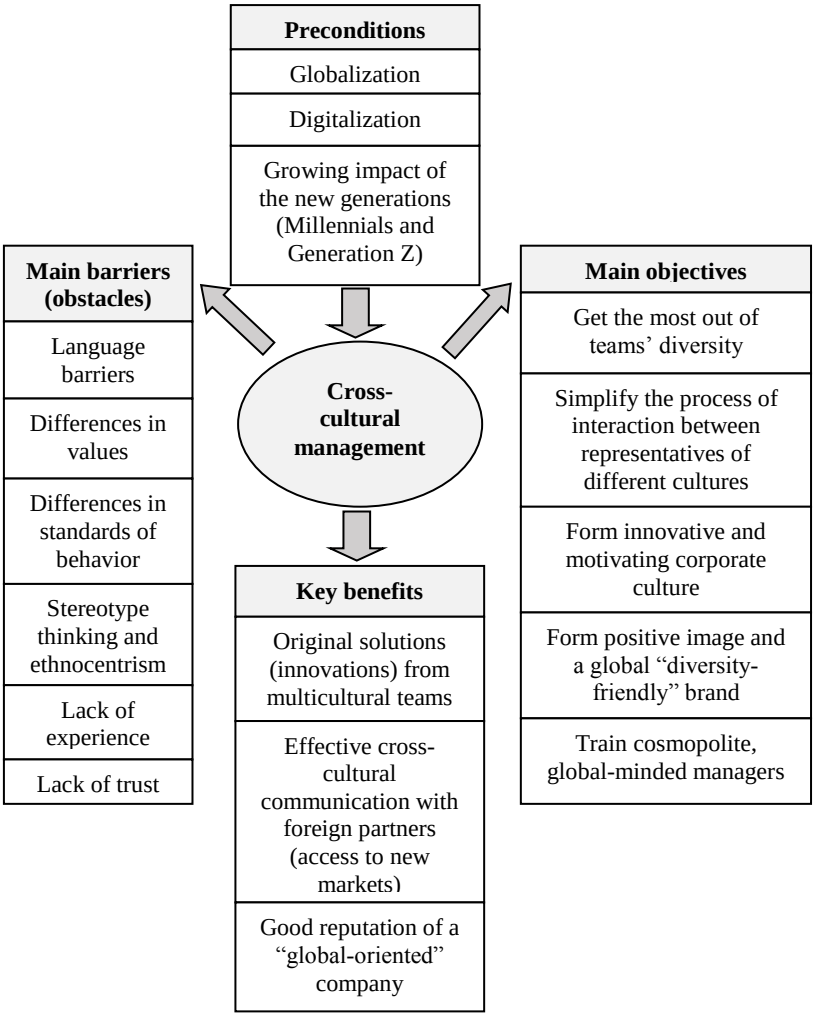

Figure 1. Cross-cultural management concept
Source: based on Lifintsev D. & Canavilhas J. (2017)

Table 1 - Motivators and main obstacles to work in a multicultural business environment for Generation Z (based on a study conducted in Germany, Romania and Ukraine; a sample of 324 respondents)

Motivators	Average (points)	Obstacles	Average (points)
Opportunity to earn more money comparing to local businesses	27,5	Language barriers	30,1
Experience of cross-cultural communication	20,2	Stereotype thinking	21,5
Opportunity to travel the world	23,7	Differences in values	18,7
Opportunity to learn, to improve professional level	18,9	Differences in standards of behavior	16,7
Opportunity to be a part of global projects	9,7	Lack of trust	13,0
Total	100,0	Total	100,0

Source: Lifintsev, Fleseriu & Wellbrock, 2019

It is also interesting that Gen Zers from different countries have a lot in common following many similar trends (e.g., in social media) and it also helps them to feel more comfortable working with representatives (especially, people of their age) from other cultures.

Another key characteristic of today's modern world is the developed communication technologies. Therefore it is obvious that there is more and more intense social interaction between individuals. The process of globalization in today's dynamic world emphasis over the intercultural competences, sensitivity and skills that individuals have to possess in order to achieve success in

different types of relationships they built in various countries and regions.

Intercultural sensitivity as a part of intercultural communication competence can be defined as "an individual's ability to develop emotion towards understanding and appreciating cultural differences that promotes appropriate and effective behavior in intercultural communication[189].

In 2008 (European Year of Intercultural Dialogue) the EU launched an initiative to encourage Union members and their civil societies to talk to each other[190] (Nastase, 2018).

Intercultural communication sensitivity could help reduce disparities and overcome barriers to intercultural communication which covers two main areas: social intelligence and self-esteem.

Social intelligence is a relatively new concept and has been studied over the last four decades. According to E. Thorndike social intelligence could be defined as „ the ability to act wisely in human relations"[191].

M. Ford and M. Tisak define social intelligence as „one's ability to accomplish relevant objectives in specific social settings"[192].

More connected to our study of cultural differences and their impact on individuals' behavior is A. Marlowe's definition. He defines social intelligence as "the ability to understand the feelings, thoughts, and behaviors of persons, including oneself, in interpersonal situations and to act appropriately upon that understanding"[193]. The feelings and behavior of individuals stem

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189 Chen G. The Impact of Intercultural Sensitivity on Ethnocentrism and Intercultural Communication Apprehension, //Intercultural Communication Studies XIX: 1, 2010, p.1.

190 Nastase C., Aitaleb Z.,(2018), The impact of integration to the EU on the management cuture in Romania, Management Strategies Journal, p 20

191Randall J Q. Koper Ch., Collaço M. Social Intelligence, Self-esteem, and Intercultural Communication Sensitivity//Intercultural Communication Studies XVII: 2, 2008, p. 163.

192 Ford, M. E.Tisak, M. S. A further search for social intelligence. Journal of Educational Psychology, 75(2), 1983, p. 196-206.

193Marlowe, H. A. Social intelligence: Evidence for multidimensionality and constructindependence. Journal of Educational Psychology,1986,78(1), p.52-58.

from their cultural environment. Social intelligence can be seen as a function of culture, because the behavior and characteristics of a culture, understood as socially intelligent, may differ significantly from the understanding of this concept by representatives of another culture.

The self-esteem of individuals and its level determines the degree of their motivation in performing certain actions or reactions. People evaluate themselves and the degree depends on their knowledge, skills, which determine their pattern of behavior. When they have a low self-esteem for their own personality, their actions are aimed at increasing it so that they can feel better and more satisfied[194]. Positive self-esteem leads to effective interpersonal relationships because individuals put more effort into building positive interpersonal relationships.

Intercultural communicative sensitivity affects the active and behavioral aspects of our relationships. When individuals are aware of their cultural affiliation that is how they contribute to the development of the intercultural communicative sensitivity which helps them to become interculturally competent[195].

Additionally, intercultural communicative sensitivity can also be defined as the process by which individuals evolve cognitive, emotional, and behavioral skills that contribute to emergency communication relationships[196]. Moreover, intercultural communicative sensitivity describes the desires of individuals to understand and respect others. Managers and employees in a company who are sensitive to cultural differences are able to provide better service to their customers, as well as to provide better economic results in general. Such employees have the desire and

[194] Randall J Q. Koper Ch., Collaço M. Social Intelligence, Self-esteem, and Intercultural Communication Sensitivity//Intercultural Communication Studies XVII: 2 2008.

[195]Chen, G. M. A review of the concept of intercultural sensitivity //Human Communication, 1997, 1, p.1-16.

[196] Peng, S., A comparative perspective of intercultural sensitivity between college students and multinational employees in China. Multicultural Perspectives, 2006, No8,p.38-45.

ability to develop intrinsic motivation in order to understand, appreciate and accept differences in intercultural relationships[197].

During the last decades necessity of acquiring intercultural competence has been adopted by many European countries. However, some countries (e.g., Bulgaria) seem to be late in following the new trends in cultural education. Therefore, with the intensive development of the communication technologies, the establishment of great number of transnational and multinational companies with multicultural teams it is more important than ever to discuss and to become aware about the meaning and application of the following terms: intercultural, transcultural communication competence, cross-cultural adaptation, intercultural sensitivity and multiculturalism.

Thus, we can note that intercultural communicative sensitivity is a characteristic that has great importance for people who work with representatives of foreign cultures, whether within their own country or outside it. When individuals are communicatively sensitive they are able to achieve various goals and objectives and avoid misunderstandings, which can range from mild discomfort to misunderstandings with significant economic consequences.

Cross-cultural communication and interaction skills are definitely among the "must-haves" for the managers of the 21st century. In a digitally globalized world with the growing impact of new, "living-online" generations which communicate easily across borders, managers should be prepared to deal with highly diverse teams. Cultural intelligence is already one of the key demands for the professionals in a modern business environment and this trend is highly likely to strengthen further more.

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[197] Chen, G. M. A Review of the concept of intercultural sensitivity //Human Communication, 1997, 1, p.1-16.

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ORGANIZATIONAL CULTURE MANAGEMENT IN MERGERS AND ACQUISITIONS

Yeliena Prokhorova

As McKinsey consultants found, "some 95 percent of executives describe cultural fit as critical to the success of integration. Yet 25 percent cite a lack of cultural cohesion and alignment as the primary reason integration efforts fail"[198]. They propose to act in three key steps to understand and manage culture during a merger: diagnose how the work gets done – create a fact base and a common language; set priorities; align the top team around the planned cultural direction; hard-wire and support change – deliver a clear, coherent program woven into normal integration activities; finally – measure cultural integration during and after integration. A merger provides a unique opportunity to transform a newly combined organization, to shape its culture in line with strategic priorities.

The task of this research is to learn the organizational cultures integration problems, which arise in the process of mergers and acquisitions, and to develop recommendations on organizational culture management in the integration process.

J.W. Berry (1983, 1984)[199] identified four modes of acculturation in mergers and acquisitions: integration, assimilation, separation and deculturation. A. Nahavandi and A. R. Malekzadeh (1988)[200] developed this model. They proposed to take into account the subjective factors: how acquired firm's employees value their own culture and how attractive for them is the acquirer's culture (Fig. 1).

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[198] Oliver Engert, Becky Kaetzler, Kameron Kordestani, and Andy MacLean. Organizational culture in mergers: Addressing the unseen forces. McKinsey&Company, March 2019.

[199] Berry J.W. (1983) Acculturation: A comparative analysis of alternative forms. In R.J. Samuda and S.L. Woods (Eds.), Perspectives in immigrant and minority education (pp/ 66-77). Lanham MD: University press of America.

[200] Nahavandi, A. and A. R. Malekzadeh (1988) Acculturation in Mergers and Acquisitions, Academy of Management Review, 13, pp. 79–90. Access: http://www.jstor.org/stable/258356

From the acquirer's point of view, the relatedness of firms and their culture differences are taken into account, as shown in Fig. 2.

Integration implies a relatively balanced exchange of culture and management practices between partners and is not associated with major changes in the culture of both companies. A "partnership of equals" is possible, when individual cultures are preserved in a final unified.

		How much do members of the acquired firm value preservation of their own culture?	
		Very much	Not at all
Perception of the attractiveness of the acquirer	Very attractive	Integration	Assimilation
	Not at all attractive	Separation	Deculturation

Figure 1. Acquired firm's modes of acculturation
Source: A. Nahavandi and A. R. Malekzadeh (1988), p. 83

		Degree of multiculturalism	
		Multicultural	Unicultural
Diversification strategy: Degree of relatedness of firms	Related	Integration	Assimilation
	Unrelated	Separation	Deculturation

Figure 2. Acquirer's modes of acculturation
Source: A. Nahavandi and A. R. Malekzadeh (1988), p. 84

Upon assimilation, the acquired firm adapts its culture to the acquirer. The dominance of the culture of the acquirer is not forced, but encouraged, especially if those acquired believe, that their culture and management practices have not been successful.

When separation is recommended, both companies remain structurally separate, without any exchange of cultures. This way is recommended if cultures are too diverse (e.g., plan-oriented and innovative companies).

Deculturation is the most frequent and destructive method of combining two different cultures. An acquirer destroys the culture of the acquired firm and imposes its own. As a result, the acquired, as a rule, worsens its performance.

As we see from the figures, an acquirer and the acquired firm has to agree about the ways of organization culture management in mergers and acquisitions. It has to be congruence between the two companies regarding the preferring mode of acculturation. In this case the minimal level of resistance to change and cultural conflict may be expected. If it is incongruence between the two companies regarding the preferring mode of acculturation, the high level of resistance to change and cultural conflict may occur, which will result in performance decline after merger or acquisition.

The well-known example of negative effect of different organizational cultures on post merger's companies performance is the case of DaimlerChrysler, reported by J. Badrtalei and D. L. Bates (2007)[201]. It is generally agreed, that cultural compatibility is the greatest barrier to successful partnership integration. As one of the lessons from the DaimlerChrysler case, authors mentioned, that organizational culture must be blended rather than changed in mergers and acquisitions.

According to D. K. Datta[202] research, differences in management styles have a negative impact on acquisition performance, even if acquisitions characterized by low post-acquisition integration. The reason is that the acquiring firm management often end up imposing their own style, systems, and culture on the acquired firm. At the same time, differences in reward

[201] Jeff Badrtalei, Donald L. Bates. Effect of Organizational Cultures on Mergers and Acquisitions: The Case of DaimlerChrysler. International Journal of Management Vol. 24 No. 2 June 2007 pp. 307-317.

[202] Deepak K. Datta. Organizational Fit and Acquisition Performance: Effects of Post-Acquisition Integration. Strategic Management Journal, Vol. 12, No. 4. (May, 1991), pp. 281-297. Stable URL: http://links.jstor.org/sici?sici=0143-2095%28199105%2912%3A4%3C281%3AOFAAPE%3E2.0.CO%3B2-4

and evaluation systems are more easily and quickly reconciled following an acquisition than differences in management styles.

The more recent case is Amazon's 2017 acquisition of Whole Foods, which illustrates the tight and loose cultures merge, when they will clash. According to the data on over 4,500 international mergers from 32 different countries between 1989 and 2013, on average, the acquiring companies in mergers with tight-loose differences saw their return on assets decrease by 0.6 percentage points three years after the merger, or $200 million in net income per year[203]. In order to achieve cultural harmony in the tight and loose cultures merge, authors propose to act in the next way: negotiate culture to achieve a compromise and create flexible tightness and structured looseness; develop a cultural integration plan; explain, what changes and why have to be implemented; be ready to change the cultural integration plan.

M. Schraeder and D. R. Self (2003)[204] recommended to use such instruments to manage organizational culture in mergers and acquisitions: assess cultural compatibility; anticipate employee reactions; develop flexible integration plan, which includes the communication and negotiation with employees; share information about the integrating process; involve employees in the process; establish relationships and build trust; train, support and socialize employees.

R. A. Weber and C. F. Camerer (2003)[205] used laboratory experiments to explore merger failure due to conflicting organizational cultures. Their results show, that merged experimental groups do considerably worse on average than the two separate premerger groups were doing immediately before the merger. Comparing the task completion times before and after the merger

[203] Michele Gelfand, Sarah Gordon, Chengguang Li, Virginia Choi and Piotr Prokopowicz. One Reason Mergers Fail: The Two Cultures Aren't Compatible. Harvard Business Review, October 02, 2018. Access: https://hbr.org/2018/10/one-reason-mergers-fail-the-two-cultures-arent-compatible

[204] Mike Schraeder; Dennis R Self. Enhancing the success of mergers and acquisitions: An organizational culture perspective. Management Decision; 2003; 41, 5/6; ABI/INFORM Complete pg. 511

[205] Roberto A. Weber, Colin F. Camerer. Cultural Conflict and Merger Failure: An Experimental Approach. Management Science Vol. 49, No. 4, 2003, pp. 400–415.

reveals, that both employees are performing worse after the merger. Therefore, if to concern only with employee productivity, the merger clearly negatively affects performance. The reason is the different organization cultures conflict, when employees from two companies do not understand each other and have different approaches to problem solving and collaboration.

G. K. Stahl and A. Voigt (2008)[206] suggested, that cultural differences in mergers and acquisitions could be not only the potential source of cultural conflict, but also the source of synergy in integrated company. The managerial task in this case is to manage organizational culture after mergers and acquisitions.

A. Kumar and R. Kumar Braskar (2005)[207] found, that vitally important is to define the organizational culture in the new combined post-acquisition organization; to communicate preferable face-to-face with all involved parties during the integration process; to integrate as quick as possible to avoid or minimize resistance to change; to decide, what degree of organizational cultures' integration is needed, trying to save the best features of both organizational cultures in the new entity.

C. Lakshman (2011)[208] proposed knowledge management based model of post-acquisition integration, which includes knowledge leadership (in the form of cause–effect beliefs of integration leaders; motivation for cultural integration; integration leader resolving conflicts; reducing causal ambiguity); cultural knowledge-sharing mechanisms (sociocognitive means of cultural knowledge sharing; target involvement in the integration process; early target involvement in integration process design), that have to lead to more effective integration after acquisition due to trust, commitment, low turnover and longevity.

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[206] Günter K Stahl; Andreas Voigt. Do Cultural Differences Matter in Mergers and Acquisitions? A Tentative Model and Examination. Organization Science; Jan/Feb 2008; 19, 1; ABI/INFORM Global pg. 160

[207] Ajay Kumar and R. Kumar Braskar. Role of Organizational Culture in Mergers and Acquisitions. SCMS Journal of Indian Management< July-September, 2005, pp. 50-63.

[208] C. Lakshman. Postacquisition Cultural Integration in Mergers & Acquisitions: A Knowledgebased Approach. Human Resource Management, September–October 2011, Vol. 50, No. 5, Pp.605–623. DOI:10.1002/hrm.20447

A. S. Ivanova (2010)[209] developed the model of organizational culture management in mergers and acquisitions in six steps: organizational cultures' analysis before the integration; education of employees; changes implementation; new motivation system development; evaluation and control; organizational culture improvement. Mitrofanova E.A. and Konovalova V.G. (2017)[210] proposed to manage organizational culture in mergers and acquisitions as part of the change management process and create special Corporate Culture Transformation Management Committee at the new organization.

Generalizing the different authors' approaches to the process of organizational culture management in mergers and acquisitions, we could identify the main elements of this process (Table 1).

As can be seen from the table, the authors agree, that the process of organizational culture management in mergers and acquisitions has to include the next steps: 1) organizational cultures' analysis and cultural compatibility assessment before the integration; 2) the organizational culture in the new combined post-acquisition organization definition and flexible integration plan development; 3) communication and negotiation with employees; sharing information about the integrating process; 4) employees' involvement in the integration process; 5) new motivation and reporting system development; 6) evaluation and control; organizational culture strengthening.

Finally, we developed the dynamic model of organizational culture management in mergers and acquisitions (Fig. 3).

The arrows in the figure indicate, that the process is not unidirectional; the return arrows indicate, that in the organizational culture management in mergers and acquisitions it is possible to return to the previous stages, make refinements and changes.

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[209] А.С. Иванова. Трансформация организационной культуры в процессе слияний и поглощений. // Проблемы современной экономики, 2010, № 3, с. 209-212.

[210] Митрофанова Е. А., Коновалова В. Г. Управление корпоративной культурой при слиянии компаний: интеграция и трансформация. Международный научно-исследовательский журнал, № 10 (64), 2017. Часть 2, Октябрь, с. 103-112. DOI: https://doi.org/10.23670/IRJ.2017.64.010

Table 1. The main elements of organizational culture management in mergers and acquisitions

The authors				
M. Gelfand, S. Gordon, C. Li, V. Choi and P. Prokopowicz	**M. Schraeder and D. R. Self**	**A. Kumar and R. Kumar Braskar**	**C. Lakshman**	**A. S. Ivanova**
culture negotiation	cultural compatibility assessment; employee reactions anticipating	the new post-acquisition organizational culture definition		organizational cultures' analysis before the integration
a cultural integration plan development	flexible integration plan development		motivation for cultural integration	education of employees
explanation, what changes and why have to be implemented	negotiation with employees; sharing information about the integration	communication with all involved parties during the integration process	cultural knowledge-sharing mechanisms	changes implementation
	employees' involvement in the process; training, support and socializing		target involvement in the integration process	new motivation system development
be ready to change the cultural integration plan		decision about the degree of organizational cultures' integration		evaluation, control; organizational culture improvement

Source: Formed by author by [255,256, 259-261]

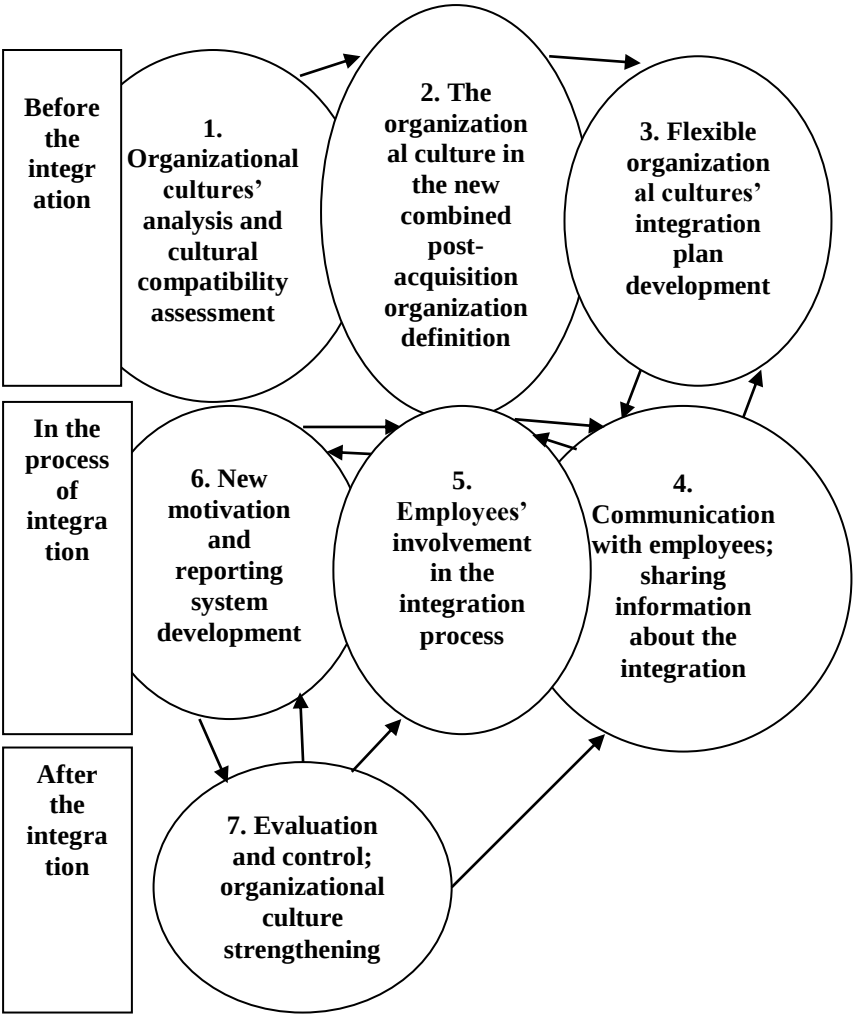

Figure 3. The dynamic model of organizational culture management in mergers and acquisitions

Source: Formed by author

We agree with McKinsey's consultants, which recommend for improving postmerger integration to create a new task, on which employees from both the acquiring and acquired firm have to work together. By using a new task, the employees are inhibited from using the full extent of their culture that is familiar from old tasks, and are able to compromise on a new shared way of doing things[211]. Similarly, it will be useful to develop new procedures, motivation and control systems in order to force employees from both organizations to work in a new way.

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[211] Jeff Badrtalei, Donald L. Bates. Effect of Organizational Cultures on Mergers and Acquisitions: The Case of DaimlerChrysler. International Journal of Management Vol. 24 No. 2 June 2007 pp. 307-317.

THE ROLE OF EDUCATION SYSTEM FOR RESPONDING THE CHALLENGES OF INDUSTRY 4.0

Gagnidze Ineza

The world economy is in a phase of rapid development. Based on the reports by recognized research organizations and the opinions of famous scholars, the paper explains the role of education system for responding the challenges of the Fourth Industrial Revolution, discusses opinions about the ways for improving school and university education, describes the best examples found in the world. The need for cooperation between different stakeholders for the implementation of effective education policies is especially emphasized in the paper.

We will start the discussion on the initiated issue by citing the forecast data that show the significant challenges that the government of every country faces. In 2018 the World Economic Forum published several reports, where the main issues are connected with the Fourth Industrial Revolution (4IR). "Across all industries, by 2022, growth in emerging professions is set to increase their share of employment from 16% to 27% (11% growth) of the total employee base of company respondents, whereas the employment share of declining roles is set to decrease from currently 31% to 21% (10% decline)"[212]. "The estimates suggest that at least 54% of all employees will require reskilling and upskilling by 2022. Of these, over a third will require more than six months of additional training"[213].

Based on the scientific papers by the researchers of various countries, OECD points out that" Some believe that 47% of all persons employed in the US are currently working in jobs that could

[212] The Future of Jobs Report 2018, Centre for the New Economy and Society. World Economic Forum. Committed to Improving the State of the World, p. viii. http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf

[213] Globalization 4.0 Shaping a New Global Architecture in the Age of the Fourth Industrial Revolution. World Economic Forum. White Paper, April 2019, p. 26. http://www3.weforum.org/docs/WEF_Globalization_4.0_Call_for_Engagement.pdf

be performed by computers and algorithms within the next 10 to 20 years (Frey and Osborne, 2013). Similar estimates are available for other countries, including Germany, where the estimate of the share of jobs at risk of automation is as high as 59% (Brzeski and Burk, 2015). For Europe as a whole, the share of jobs susceptible to automation ranges between 45% to more than 60%, with Southern European workforces facing the highest exposure to a potential automation (Bowles, 2014)"[214].

"A study by McKinsey & Company suggest that by 2030, up to 375 million workers will need to switch occupational categories due to automation and all workers will need to adapt to co-exist alongside increasingly capable machines. A 2017 McKinsey Global Institute survey reported that 62% of business executives believe that more than a quarter of their staff will need to be retrained in part because of automation and digital technologies"[215]. "By one popular estimate, 65% of children entering primary school today will ultimately end up working in completely new job types that don't yet exist"[216]. *This is the generation that will enter the significantly changed labor market in 2030. This poses great challenges to all levels of education and grants special importance to it.*

With these changes in technology and the labor market, workers as well as policy makers face daunting challenges. Without effective policies, the gap between skilled and unskilled workers will aggravate the trend of income inequality, leading to social instability and undermining inclusive growth efforts.

Due to the above-mentioned, it is essential to find the key tools, which will contribute to mitigate the expected problems. In our opinion, education represents one of these tools.

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[214] FUTURE OF WORK AND SKILLS. Organisation for Economic Co-operation and Development (OECD) Paper presented at the 2nd Meeting of the G20 Employment Working Group. 15-17 February 2017 Hamburg, Germany, p.8. file:///C:/Users/admin/Desktop/wcms_556984.pdf

[215] The Future of Skills in the Age of 4th Industrial Revolution. Desire2Learn (D2L), p. 2. file:///C:/Users/admin/Desktop/The-Future-of-Skills-Whitepaper-1.pdf

[216] The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution, World Economic Forum, 2016, p.3. http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf

The Report "Towards a Reskilling Revolution", developed by the World Economic Forum, aims to help guide workers, companies, and governments to prioritize their actions, time and investments on focusing reskilling efforts effectively. "To make reskilling real, and prepare for accelerated structural change of the labour market, a wide range of stakeholders— governments, employers, individuals, educational institutions and labour unions, among others—will need to learn to come together, collaborate and pool their resources more than ever before"[217].

To emphasize the need for the above collaboration, the World Economic Forum has developed recommendations for three key stakeholders, in particular, for individuals, employers and policy-makers:

— For individuals, particularly those under risk of displacement, simply to remain employed will require engaging in lifelong learning and regular reskilling.

— For employers, investment in workforce reskilling and human capital development is a "no-regret action"—that is, it will be a beneficial investment even in the absence of skills shortages.

— For policy-makers, fostering continuous reskilling and lifelong learning across the economy will be critical in order to maintain a labour force with the tools needed to fuel inclusive economic growth and to ensure that companies can find workers with the skills needed to help them succeed and contribute their full potential to the economy and society.

The EU also considers that active involvement of companies in the development of effective education policies is highly important. With the purpose to prepare for the expected changes, the EU has developed two recommendations for education policy:

1. "Build a "European Coalition for Reskilling and Digitizing Industry" consisting of large European manufacturing companies which can help SMEs throughout the EU to develop their own

[217] *Towards a Reskilling Revolution A Future of Jobs for All.* World Economic Forum. In collaboration with The Boston Consulting Group. Insight Report. January 2018, p.18. http://www3.weforum.org/docs/WEF_FOW_Reskilling_Revolution.pdf

reskilling programmes. The coalition would be modelled on the Digital Skills and Jobs Coalition;

2. Upgrade the network of Digital Innovation Hubs into a network for innovation and skills development and training. Digital Innovation Hubs can function as regional facilitators that bring together regional SMEs seeking reskilling opportunities and large companies in the European Coalition for Reskilling outlined in 1"[218].

A number of papers and reports are devoted to describing the skills that will be necessary for the employment of individuals in the near future. Top 10 trending skills determined by the World Economic Forum for 2022are as follows: Analytical thinking and innovation; Active learning and learning strategies Creativity, originality and initiative Technology design and programming Critical thinking and analysis Complex problem-solving Leadership and social influence Emotional intelligence Reasoning, problem-solving and ideation Systems analysis and evaluation[219].

New schools and new views on teaching are springing up around the world to help prepare the next generation for a rapidly changing employment landscape. One of the most significant developments in the literature of human capital and education pertains to the importance of early childhood education. Through a global crowdsourcing campaign, the World Economic Forum identified eight critical characteristics,16 examples of schools, education programmes and school systems that are paving the way toward Education 4.0[220]. These schools are selected both from developed and less developed countries, namely:

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[218] Reskilling for the Fourth Industrial Revolution. Formulating a European Strategy. Dittrich, P.J. Jacques Dolores Institut, Berlin, Policy Paper 175, 3 November 2016, p.1. https://institutdelors.eu/wp-content/uploads/2018/01/digitalskill-jdib-nov2016.pdf

[219] The Future of Jobs Report 2018, Centre for the New Economy and Society. World Economic Forum. Committed to Improving the State of the World. ISBN 978-1-944835-18-7, p. 12. http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf

[220] Schools of the Future Defining New Models of Education for the Fourth Industrial Revolution. Platform for Shaping the Future of the New Economy and Society. January 2020, pp.15-26. , file:///D:/Kyiv%20-%202019%20-%202020/Kyiv%20-%202020/WEF_Schools_of_the_Future_Report_2019.pdf

1. *Global citizenship skills* (Human activity continues to push planetary boundaries, posing further risk to growth and equality. Children must have the skills to navigate this new context, maintain social cohesion, promote sustainability and be agents of positive change). The Green School, opened in Bali (Indonesia) in 2008 is considered as one of the best examples of developing such skills by the World Economic Forum. The School is committed to education that promotes sustainability and shapes future green leaders. It currently serves more than 800 students aged 3–18, with plans to expand to New Zealand, South Africa and Mexico by 2021. There is another school, Kakuma Project, Innovation Lab Schools, in Kenya as well. The schools have developed their own curriculum that combines the 17 UN Sustainable Development Goals with STEAM (science, technology, engineering, arts and math) learning to foster empathy and global citizenship.

2. ***Innovation and creativity skills*** (In an ever-changing economic context, countries that can quickly generate and adopt new ideas, processes and products will have a competitive advantage. Fostering innovation and creativity will require a shift toward more interactive methods of instruction where teachers serve as facilitators and coaches rather than lecturer). The example showing the development of such skill is found in Canada, namely, The Knowledge Society: Combining Hard and Soft Skills to Create the Next Generation of Innovators. It was designed to mirror the learning and working environments of major technology companies, exposing learners to the most cutting-edge innovations, such as blockchain, robotics and artificial intelligence, to help them understand how to use these tools to drive positive change in the world. Another successful example is in Mali - Kabakoo Academies. Kabakoo - which means "to wonder" in the Bamanan language in West Africa - is a pan-African network of schools that aims to help solve this challenge by empowering young Africans with the innovation skills needed to be employable within their local contexts, with a focus on small-scale manufacturing.

3.*Technology skills* (To capitalize on the full potential of the Fourth Industrial Revolution, businesses and economies must foster

technology skills in the workforce of the future). A worthy example showing the development of the above skill is in Viet Nam, namely, TEKY STEAM. TEKY focuses on teaching technology skills through modules on programming, robotics, website design, multimedia communications and animation. Students spend about 80% of their learning time interacting with technology. Another successful example is in Indonesia: Accelerated Work Achievement and Readiness for Employment - AWARE. This project aims to build a future-ready workforce with the skills needed to succeed in the digital economy. It creates direct links between students, schools and industry leaders to support work-readiness among youth through structured, work-based learning in collaboration with over 65 private sector companies. Partner companies include BMW, Globe Telecom, LG Electronics and Schneider Electric.

4.*Interpersonal skills* (Fostering these skills can help children develop healthy relationships with others and consider different views, which can complement and augment other skills of the future). One of the best examples of developing these skills is in Spain "iEARN": Creating a Global Community of Learners through Virtual Cultural Exchange. The iEARN is a non-profit organization founded in 1988 that partners with over 30,000 schools and youth organizations in more than 140 countries. It creates a global community of learners that engage in cross-cultural exchange and collaborate on service-learning projects via an online network. Another successful example is in Finland South Tapiola High School. The Finnish school system is consistently ranked as one of the best in the world, with South Tapiola high school ranked as one of the best schools in the country. Founded in 1958, it currently serves over 500 students, combining the Finnish national curriculum with a unique focus on collaboration through entrepreneurship. In the school's Young Entrepreneurship Programme, for example, students work in groups to design and create their own business throughout the course of the year. These groups of students go on to compete in national competitions against other student entrepreneurs.

5.*Personalized and self-paced learning* (Creating learning ecosystems that are personalized and self-paced; accessible and

inclusive; problem-based and collaborative; and lifelong- and student-driven can help unlock, for example, the interpersonal and innovation skills needed for the future, much in the same way that global citizenship can help create learning that is more inclusive). One of the best examples showing the development of these characteristics is in India Pratham's Hybrid Learning Programme. It works under two basic assumptions: 1) it takes a village to educate a child, and 2) children are naturally inclined to learn. There are no teachers in the Programme. Instead the Programme taps into children's natural learning curiosity to enable entirely student-group-led activities, with volunteers acting as supervisors and facilitators. Another successful example is Anji Play (China). The Anji Play curriculum uses true play as the mechanism for learning. The basic premise of this model is that any environment can become a learning environment. Anji Play is an early childhood curriculum established in 2002.

6. ***Accessible and inclusive learning*** (Despite massive expansion of public education in recent decades, learning remains inaccessible to many children around the world. As education continues to be a key driver of social mobility and well-being, learning systems must shift toward more accessible, and therefore more inclusive, methods to ensure access to opportunity for everyone). The United States Prospect Charter Schools (Designing an Inclusive and Equitable Approach to Learning) provide one of the best examples of these characteristics of teaching. The Prospect Schools closely mirror the city's diversity. At the Windsor Terrace campus, for example, 41% of Windsor Terrace's 324 middle schoolers are white, 34% are Latino, 11% are black and 6% are Asian. Half of its students are from economically disadvantaged backgrounds, and 25% receive special education service. The second successful example of this form of teaching is also found in the US, namely: Tallahassee Community College (TCC), Centre for Innovation, Digital Rail Project. Like many institutions of higher learning, TCC has a robust "dual enrollment" programme where college courses are offered to students in primary and secondary schools.

7. ***Problem-based and collaborative learning*** (Today's innovation-driven economy depends on the creation of wholly new ideas, services, products and solutions, and there is no process or formula for doing that. Creativity and innovation cannot be imitated). One of the best examples of these characteristics of teaching is in Peru - Innova Schools. Each child participates in the school's Innovation Programme, which challenges students to design unique solutions to a social challenge. Each challenge is designed to be open-ended, enabling students to focus on the ideation and design process rather than finding an "answer" (e.g. "how might we reduce waste in our community?"). The second successful example of this form of teaching is in Oman - British School Muscat. It has developed a curriculum focused on discovery learning - a student-centered approach where multiple subjects are integrated into collaborative projects focused on the experience rather than the final product or answer. A recent survey shows that over 97% of parents felt their child enjoyed being at this school.

8. ***Lifelong and student-driven learning*** (While traditional education systems have been designed to decrease learning with age, a new system must emerge whereby people engage in lifelong learning to navigate future job disruptions. To realize this vision, a love of learning must be instilled in children from a young age). One of the excellent examples of this kind of teaching is the United Kingdom - Skills Builder Partnership.This is a global partnership that works with schools, teachers, employers and other organizations to build essential skills in children and young people. Its network includes 514 schools and colleges, over 200,000 students and over 700 organizations. Over the 2018–2019 school year, over 121 employers participated in the workplace exchange. Ecuador - Skilling for Sustainable Tourism provides an example of another successful form of teaching. Ecuador's growing travel and tourism sector is projected to further increase its contribution to the economy's growth in the coming years and is a major contributor to youth employment in the country. The Skilling for Sustainable Tourism Programme brings together key experts and leaders in the travel and tourism industry with the Ministry of Education to design

and implement a curriculum that develops Ecuador's future tourism workforce.

The discussion about the future schools emphasizes the necessity of such space, where various *stakeholders* (government, business, individual, educational institution) can engage in effective dialogue. We consider that such space is created in entrepreneurial universities. Here it is possible to implement projects for innovative economic development with minimal risks, time and financial costs.

We want to substantiate the effectiveness of the entrepreneurial university model based on the interesting statistics of Stanford University (USA)[221]. Located in the San Francisco Bay Area, Stanford University is a place of learning, discovery, expression and innovation. Stanford university is one of the most successful entrepreneurial universities in the world. Stanford alumni and faculty have created more than 39,900 companies since the 1930s. In 2017-18 Stanford University received $40.96 million in gross royalty revenue from 813 technologies. Fifty-three of the inventions generated $100,000 or more in royalties. Seven inventions generated $1 million or more. In 2017–18, the Office of Technology Licensing (OTL) concluded 150 new licenses. Stanford has 18 designated independent laboratories, centers and institutes that provide a physical and intellectual intersection between schools and disciplines. More than 2,700 scientists worldwide use the lab's facilities each year, and more than 700 scientific papers are published annually based on research at SLAC, which has earned four Nobel prizes.

Many universities have shifted to entrepreneurial models recently. This is substantiated by a large number of publications on this issue in the scientific field. Some of them provide analysis of the experience of the universities in several countries and management of innovation processes in these universities (Fini[222] et al. 2017;

[221] Stanford University https://facts.stanford.edu/wp-content/uploads/sites/20/2019/02/stanford-facts-2019.pdf

[222] Fini, R., Fu, K., Mathisen, M.T., Rasmussen, E. & Wright, M. Institutional determinants of university spin-off quantity and quality: A longitudinal, multilevel,

Gagnidze and Dominici[223] 2019; Gogorishvili[224] et al. 2019; Guerrero[225] et al. 2020; Lekashvili[226] 2019a; Schoen[227] et al. 2014; Sciarelli[228] et al. 2020; Sobolieva and Lazarenko[229] 2019).

The concept of several schools that are relevant to Education 4.0 include sustainable development. It is one of the major challenges the modern world faces. The United Nations Organization has set 17 goals for sustainable development by 2030.Sustainable development is one of the challenges faced by the development of business environment. It is worth mentioning that in scientific literature there is active discussion on circular economy.

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cross-country study, Springer. Small Business Economics Vol. 48, No. 2, 361-391, 2017, http://dx.doi.org/10.1007/s11187-016-9779-9

[223] Gagnidze,I. & Dominici, G. Effectiveness of an Entrepreneurial Universities and Spin-offs: Experiences and Challenges. 6th Business Systems Laboratory International Symposium, BORDERS WITHOUT BORDERS: Systemic frameworks and their applications for sustainable well-being in the global era. BOOK OF ABSTRACTS, ISBN 9788890824272, Pavia, Italy, 2019, Ab.61 http://bslab-symposium.net/Pavia-2019/BSLAB-%20Book%20of%20Abstract-Pavia-2019.pdf#page=234

[224] Gogorishvili, I., Gagnidze, I. & Papachashvili, N. Innovative Approaches in Higher Education System. 6th Business Systems Laboratory International Symposium, BORDERS WITHOUT BORDERS: Systemic frameworks and their applications for sustainable well-being in the global era. BOOK OF ABSTRACTS, ISBN 9788890824272, Pavia, Italy, Ab.56, 2019, http://bslab-symposium.net/Pavia-2019/BSLAB-%20Book%20of%20Abstract-Pavia-2019.pdf#page=214

[225] Guerrero, M., Urbano, D. & Gajón, E. Entrepreneurial university ecosystems and graduates' career patterns: Do entrepreneurship education programs and university business incubators matter. Journal of Management Development. 2020. In press.

[226] *Lekashvili, E. Current issues of new economic policy. International Scientific and Practical Internet Conference Business Strategy: Futurological Challenges, November 20-22, 2019, Kyiv, pp.19-24. KHEU, 2019. 495. ISBN 978–966–926–310–0; УДК 005.21:001.18]:004.773.7. https://www.bsfucon.org/*

[227] Schoen, A., Potterie, B. P. & Henkel,J.: Governance typology of universities' technology transfer processes. The Journal of Technology Transfer, Springer, Vol. 39, No. 3, 2014, pp. 435-453, DOI: 10.1007/s10961-012-9289-0

[228] Sciarelli, M., Landi, G.C., Turriziani, L. & Tani, M. Academic entrepreneurship: founding and governance determinants in university spin-off ventures. J Technol Transf (2020). https://doi.org/10.1007/s10961-020-09798-2

[229] Sobolieva, T. & Lazarenko, Y. Intellectual Property Management in the Shift Towards Open Innovation. Int. J. Economics and Business, Vol. XI, No. 2, 2019, pp.185-195. http://dspace.tsu.ge/xmlui/handle/123456789/358

The circular economy's central aim is to extend the life of all the goods and materials being bought, sold, used and discarded daily, throughout our societies, in order to curb extraction, pollution and waste**.**

One of the latest researches carried out by Newsweek Vantage indicates that "companies are prioritizing the following strategies and business models: *REduce* **(**Using design and manufacturing technology to lower material, energy and waste footprints**),** *REuse* **(**Offering subscription, leasing or sharing models, rather than basing business on one-off sales**),** *REmake* **(**Designing products that can be more easily repaired or "remanufactured" into new products**),** *REcover* (Turning by-products into new products or adding recycled content to products and packaging), *REnew* **(**Substituting renewable for finite materials and focusing more on sustainable sourcing**).**

Research also finds that "circularity is more than just an add-on to corporate social responsibility or sustainability strategies. It requires a complete product and business model rethink, starting at the choice of material through to how products are designed, made, used - and disposed of"[230].We believe that the cheapest way to develop such business models of the future is to work on them in university TTOs.

Why do we think so? Sustainable development and the development of business models of circular economy require changes in the behavior of individuals, which is impossible without enhancing propaganda and teaching at all levels of the education system. Therefore, the efficiency of university TTOs is conditioned by their functioning in educational space along with research. In this context, rethinking the university system (Vesperi and Gagnidze 2018[231]) and the formation of entrepreneurial universities gain

[230] Shields, K. (2019) Going Circular: How Global Business is Embracing the Circular Economy. Ed: Cheah, P-K. Newsweek Vantage. Newsweek and Think Big Partners WLL, p.2.

[231] Vesperi, W. & Gagnidze, I. Rethink University system: towards Entrepreneurial University, E-Book of Abstract, Fifth Business Systems Laboratory International Symposium, Cocreating Responsible Futures in the Digital Age. Naples, Italy, 2018, pp.210-211. http://bslab-symposium.net/Napoli-2018/BOA-BSLAB-Symposium-2018.pdf#page=219

special importance. Transferring new technologies from foreign countries becomes easy by including these universities into international research programmes. Such universities create many new spin-offs and clusters around them through the TTOs. In this way, they contribute to the region's innovative development (Sepashvili 2018[232]). All the above proves that reform of the education system is vital for all countries. While determining the policy, requirements of sustainable development and the circular economy, as well as digital challenges need to be taken into account (Bichia[233] 2017; Gagnidze[234] 2019).

Ostergaard and Nordlund (2019) argue that, while most debates around the future of education focus on the skills needed for the future and the imperative of reskilling, it is equally important to discuss the inevitable structural transformations of higher education. The authors discuss four major developments for "current *higher education system*:

1. *Increasing need for life-long learning in a non-linear world*;
2. *Evolving needs and expectations of the "student-consumer"*;
3. *Emerging technologies and business models*;
4. *Towards a "skills over degrees" model*".[235]

[232] Sepashvili, E. Innovative Clusters – A Model for Rising International Competitiveness. E-Book of Abstract, Fifth Business Systems Laboratory International Symposium, Cocreating Responsible Futures in the Digital Age. Naples, Italy, 2018, pp. 219-221. ISBN 9788890824265 http://bslab-symposium.net/Napoli-2018/BOA-BSLAB-Symposium-2018.pdf#page=228

[233] Bichia, Q. *The effect of modern globalization and automatization trend on labor market.* In: The 2nd International Scientific Conference: Challenges of Globalization in Economics and Business. TSU Press, Tbilisi, 2017, pp. 96-102. ISBN 978-9941-13-650-4 http://eprints.tsu.ge/id/eprint/1430

[234] Gagnidze, I. Future challenges and the problems of development of the Circular Economy Business models. Proceedings of the International Scientific and Practical Internet Conference "BUSINESS STRATEGY: FUTUROLOGICAL CHALLENGES". ISBN 978–966–926–310–0. KNEU, Kyiv, 2019, pp.13-18. https://ir.kneu.edu.ua/bitstream/handle/123456789/31848/sbfv_19_1.pdf?sequence=1

[235] Ostergaard S.F. &Nordlund A. G. (2019) The 4 biggest challenges to our higher education model – and what to do about them

It is also worth noting that planning and implementation of the necessary changes need to be carried out on school level as well as on university and lifelong learning levels. We believe that for improving the effectiveness of education policy it desirable to study: (a) the occupations which will inevitably be replaced by artificial intelligence; (b) the occupations that are less probability of being computerized based on current technology; (c) the skills that will be demanded on the labor market in the digital era; (d) the teaching methods that ensure developing competencies and skills needed for decent work and professional skills needed for sustainable development in digital era.

Facing the 4thindustrial and Reskilling revolutions, worldwide-recognized research centers forecast particularly high rates of economic development. There is no doubt that a small country like Georgia cannot determine trends in the development of the world economy. Therefore, given the above conditions, it is difficult to choose the right vector of development.

We believe that for making the right choice several factors should be taken into consideration; in particular, elaboration and implementation of the education research programmes and development of the sectors that will provide the possibility to adopt and introduce the new technologies created in the developed countries in Georgia should be supported (Seturidze[236] 2016; Surmanidze[237] et al. 2018), based on competitive advantages of Georgia production of inelastic demand goods should be focused on

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https://www.weforum.org/agenda/2019/12/fourth-industrial-revolution-higher-education-challenges/

[236] Seturidze, R. Role of the ERP systems in the successful management of Georgian companies. Book of Abstracts Business Systems Laboratory Review. ISBN 9788890824234. Vilnius, Lithuania. 2016. pp.191-194. http://bslab-symposium.net/Vilnius.2016/BSLab-Vilnius2016-e-book_of_Abstracts.pdf

[237] Surmanidze, Z., Tsetskhladze, M. and Chanidze, K. Tendencies and perspectives of internet-economic development in Georgia. E-Book of Abstract, Fifth Business Systems Laboratory International Symposium, Cocreating Responsible Futures in the Digital Age. Naples, Italy, 2018, pp. 227-230. http://bslab-symposium.net/Napoli-2018/BOA-BSLAB-Symposium-2018.pdf#page=236

(Katsitadze and Tushishvili[238] 2020; Kharaishvili[239] 2017; Seturi and Urotadze[240] 2019; Tepnadze[241] 2019).

The Georgian scientist-economists also actively discuss the policy directions for responding the challenges of the Fourth Industrial Revolutionat HEIs (Gagnidze[242] 2020; Lekashvili[243] 2019b; Tavartkiladze[244] 2020), Industry 4.0 general challenges (Papachashvili[245] 2018; Jamagidze[246] 2020), problems of Gaining

[238] Katsitadze, N. & Tushishvili, A. Contemporary Challenges in the Development of Buseness (MICE) tourism. V International scientific and practical conference "Strategic Imperatives of Modern Management" (SIMM-2020), KNEU, Kyiv, 2020, pp. 208-212. https://ir.kneu.edu.ua/bitstream/handle/123456789/32923/sism_20_208-212.pdf?sequence=1

[239] Kharaishvili E. Challenges for sustainable food security in Georgia, XV EAAE Congress in Parma: Towards Sustainable Agri-Food Systems: Balancing between Markets and Society, Parma, Italy, 29 August – 1 September 2017. https://www.researchgate.net/publication/319979747_Challenges_for_sustainable_food_security_in_Georgia

[240] Seturi M. and Urotadze, E. Some opinions about sustainable development and tourism (case of Georgia). V International scientific and practical conference "Strategic Imperatives of Modern Management" (SIMM-2020), KNEU, Kyiv, 2020, pp. 86-289. https://ir.kneu.edu.ua/bitstream/handle/123456789/32943 /sism_20_286-289.pdf?sequence=1&isAllowed=y

[241] Tepnadze M. Agriculture and Rural Development Policies and Institutional Frameworks; Proposed Mapping for Wine Tourism in Georgia. Proceedings of the 9th International Scientific Conference Rural Development 2019. pp. 492-496. https://ejournals.vdu.lt/index.php/rd/article/view/616/898

[242] Gagnidze, I. The Role of Entrepreneurial Universities for Responding the challenges of Reskilling Revolution. V International scientific and practical conference "Strategic Imperatives of Modern Management" (SIMM-2020), KNEU, Kyiv, 2020, pp. 323-327. https://ir.kneu.edu.ua/bitstream/handle/123456789/32952/sism_20_323-327.pdf?sequence=1

[243] Lekashvili, E. Management on Innovations in Georgian Higher Educational Institutions: Key Problems with teaching Economic Science. Marketing and Management of Innovations. Issue 1, 2019, ISSN 2227-6718 (on-line), ISSN 2218-4511 (print), UDC 378.147:33, http://doi.org/10.21272/mmi.2019.1-23., pp.281-293;

[244] Tavartkiladze M. Emploiment challenges in Georgia. V International scientific and practical conference "Strategic Imperatives of Modern Management" (SIMM-2020), KNEU, Kyiv, 2020, pp. 350-354. https://ir.kneu.edu.ua/bitstream/handle/123456789/32959/sism_20_350-354.pdf?sequence=1

[245] Papachashvili, N. Industry 4.0 and its impact on the international trade. IV International scientific and Practical Conference "Strategic Imperatives of Modern

Competitive Advantages in digital era and innovative cluster development (Churchelauri[247] 2018; Polodashvili[248] 2019) and other issues related to the formation of effective future business environment in Georgia.

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Management" (SIMM-2018), KNEU, Kyiv, Ukraine, 2018, pp.444-453. http://ir.kneu.edu.ua/bitstream/2010/24244/1/444-453.pdf

[246] Jamagidze, L. Trade Performance and Policy Challenges under Globalization 4.0. Proceedings of the *V International Scientific and Practical Conference on* **"**Strategic Imperatives of Modern Management**".** KNEU, Kyiv, 2020, pp. 191-194; https://drive.google.com/file/d/1dOqDdXMJjcmJJAmd8PSDI6laHcO4yYiW/view

[247] Churchelauri M. Perspectives of transport cluster development in Georgia. IV International scientific and practical conference "Strategic Imperatives of Modern Management" (SIMM-2018), KNEU, Kyiv, 2018, pp.279-283. https://core.ac.uk/download/pdf/197267024.pdf

[248] Polodashvili, A. International scientific links of Georgia for the innovative development of economy. V International scientific and practical conference "Strategic Imperatives of Modern Management" (SIMM-2020), KNEU, Kyiv, 2020, pp. 347-350. https://ir.kneu.edu.ua/bitstream/handle/123456789/32958/sism_20_347-350.pdf?sequence=1&fbclid=IwAR0S1OPACzZdMNen3lOcZX1H335XkZcIVtzpbOeQRmRxC-HLlwZpnvM4clg

THE IMPACT OF DIGITALIZATION AND QUARANTINE RESTRICTIONS (COVID-2019) ON ENSURING THE QUALITY OF EDUCATIONAL SERVICES

Sahaidak Mykhailo
Simshah Iryna

Usage of information technologies, tools and software products has become an integral part of modern life. Digitalization has entered all spheres of society, especially during the introduction of quarantine measures caused by the COVID-19 pandemic. Currently, the most urgent issue for all countries of the world is capacity-building for transformation of the opportunities of higher education for training of people, students and supporting teachers, their adaptation, creative and effective work in a digitalized environment. At the same time, the main focus remains to ensure the quality of education, training and teaching. After all, it is quality that plays an important role in the development of high-quality education, further career growth of specialists and the development of the state.

The combination of educational processes and technologies is manifested in fast-growing online offers from universities around the world: the creation and development of platforms for mass online courses (from micro-credit programs to full-fledged step-by-step training programs); the introduction of course management systems, virtual reality elements into the educational process; the establishment of internal and external communication through the use of electronic document management and programs for electronic success accounting; the creation and functioning of virtual universities, etc. Back in 2014, Google published the most searched for queries in the "Universities" category. According to Google, most of the queries were related to online learning. Among the most popular universities, according to published data, were the University of Phoenix (USA), Massachusetts Institute of Technology (USA) and Open University (UK). The ranking of the most popular platforms for mass online courses, through which the world's leading educational institutions offer their services, is headed by Coursera,

which has more than 2000 programs ranging from coding to personal development. The Ukrainian equivalent is the Prometheus platform for open mass online courses.

The period of both strict and adaptive quarantine restrictions caused by the COVID-19 pandemic forced educational institutions to review their technical and technological equipment, taking into account the implementation of remote and mixed forms of training, and retrain scientific and pedagogical personnel. The emphasis was placed on rapid response and search for solutions in quarantine conditions. Most educational institutions have organized 100% filling of educational content in their existing course management systems in a short time (a common global practice is to use Modular Object-Oriented Dynamic Learning Environment (MOODLE)) and switched to using software products for organizing remote conference communication using cloud technologies for effective training sessions. However, in the process of establishing remote communication, the following factors remained unaccounted for: technological equipment and digital skills of teachers, access to the Internet network and the technical ability of applicants to take advantage of the opportunities provided. One of the most common problems faced by both applicants and teachers is low speed or lack of an internet connection. According to the data provided by PJSC "Ukrtelecom", at the end of 2019, 15% of the total population of Ukraine is in the digital divide zone, that is, they are not covered by the network of any of the internet service operators[249].

Based on the results of international studies conducted by Cable.co.uk and M-Lab, in 2020, Ukraine ranks 92nd in the world, out of 221 countries in terms of broadband speed[250].

A visual representation of the results of research published by Interactive map, which shows the name of the corresponding country, its rating among 221 countries, the average download speed

[249] Укртелеком «15% населення України живе в зоні цифрового розриву», 2019. URL: https://ukrtelecom.ua/presscenter/15-naselennya-ukraini-zhive-v-zoni-tsifrovogo-rozrivu/

[250] Worldwide broadband speed league, 2020. URL: https://www.cable.co.uk/broadband/speed/worldwide-speed-league/

and how long it takes to download a 5 GB HD movie at this average speed, is shown in Fig.1, and dynamics of changes in the average download speed in Ukraine in 2017-2020, shown in Fig.2.

Figure 1. Interactive map of countries by average broadband speed measured

Source: Worldwide broadband speed league, 2020 (https://www.cable.co.uk/broadband/speed/worldwide-speed-league/)

Color-coding of countries allow you to see the regions with the fastest and slowest broadband speeds. Majority of the"fast" countries are located in Europe, while the slowest are located in the area of the African continent.

It should also be noted that in 2019, Ukraine ranked 81st out of the 207 countries studied. On Fig.2 you can see the dynamics of changes in the average download speed over the past 4 years. In general, there is a growth trend in the average download speed.

As digital disruptions increase during the COVID-19 pandemic, which is caused by an increase in the number of users and internet operations, the problem arises of how best to combine technological capabilities and human well-being. This issue is at the top of the agenda of world leaders. The Network Readiness Index (NRI) shows the application and use of information and

communication technologies (Network Readiness Index 2019: Towards a Future-ready Society, 2019). NRI serves as a tool for assessing progress and sustainability in the digital age, including their impact on the development of the digital economy.

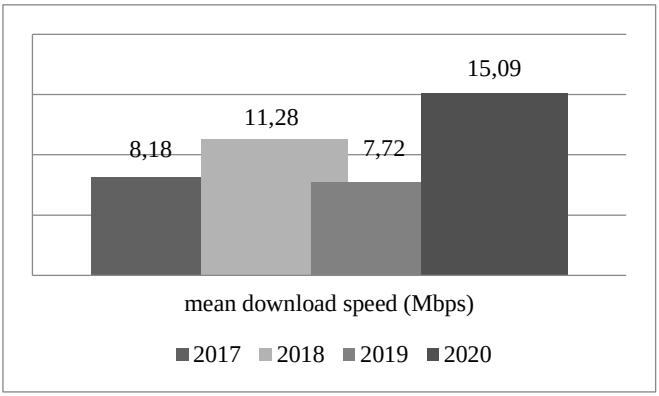

Figure 2. Dynamics of changes in the average download speed in Ukraine (2017-2020)

Source: Formed by author(s)

Thus, in 2019, compared to previous years (2016, 2015), an improved NRI was introduced. This was done to recognize the idea that a collective, prosperous future can only be achieved by integrating people and technology with the right governance structures. The improved NRI is based on four main dimensions (Fig.3): technology, people, management and influence. Participating countries are ranked based on their results in 62 variables[251].

As noted in the Network Readiness Index 2019: Towards a Future-ready Society, "technology" is the foundation of the network economy. In this category, the level of technology is evaluated by such blocks as: "Access" (the basic level of ICT, which includes communication infrastructure and accessibility); "Content" (digital

[251] Worldwide broadband speed league, 2020. URL: https://networkreadinessindex.org/

technologies that are produced in countries and local content) and "Future Technologies" (he degree of countries' readiness for the future of the networked economy and the introduction of artificial intelligence and Internet of things technologies).

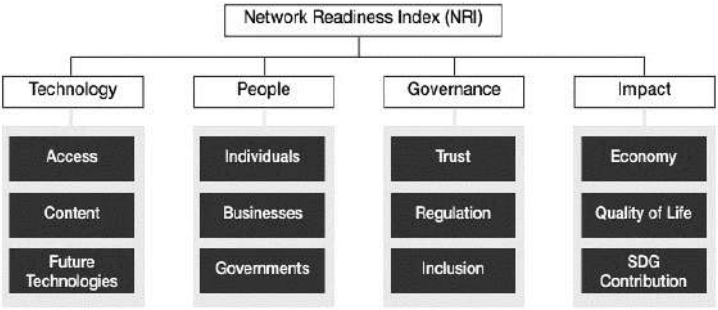

Figure 3. The Network Readiness Index (NRI) 2019 model

Source: The Network Readiness Index 2019: Towards a Future-Ready Society (https://cutt.ly/xgqHfl9)

The next category, "People", characterizes the use of ICT based on the analysis: "Individuals" (people's use of technology and skills), "Businesses" (use of ICT by companies) and "governments" (use and investment of ICT by government). The components of this category are: "Trust" (safety of people and companies in the context of the networked economy); "Regulation" (the degree to which the government is encouraged to participate in the networked economy through regulation) and "Inclusion" (digital differences between countries)[252].

"Impact" assesses the consequences of participation in the networked economy in the categories: "Economy" (economic impact), "Quality of life" (social impact) and "SDG Contribution" (the role of ICT in the context of the Sustainable Development Goals).

[252] Network Readiness Index 2019: Towards a Future-ready Society, 2019. URL: https://networkreadinessindex.org/2019/nri-2019-analysis/

According to the data obtained, the highest positions by the NRI indicator are occupied by Sweden, Singapore, The Netherlands, Norway and Switzerland (Network Readiness Index 2019: Towards a Future-ready Society, 2019). According to this indicator, in 2019, Ukraine ranked 67th out of 121 countries studied.

In general, as can be seen from Fig.4, the main driving force is "people". While the greatest scope for improvement is technology.

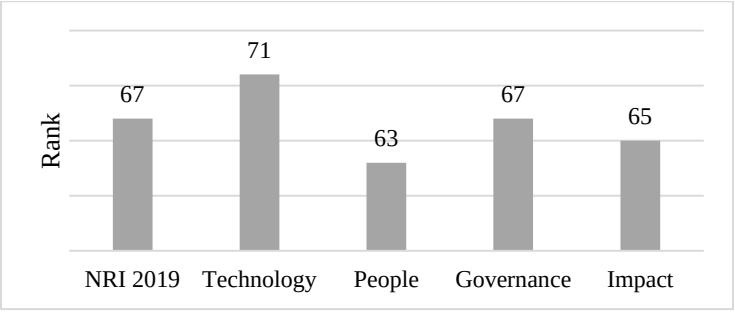

Figure 4. Ukraine global ranking, overall and by pillar

Source: The Network Readiness Index 2019 Ukraine (https://networkreadinessindex.org/countries/ukraine/)

As you can see in Fig.5 Ukraine is part of the group of countries in the European region with a lower-than-average income level. As noted in the report "Network Readiness Index 2019 Ukraine", Ukraine's strong indicators include adult literacy, e-commerce legislation, and income inequality (Fig.5). In contrast, the weakest indicators are the economy, including 4G mobile network coverage, phone prices, and the freedom to make life choices.

Thus, we can see that the level of "digitalization" of Ukraine and the level of its readiness requires considerable attention and development.

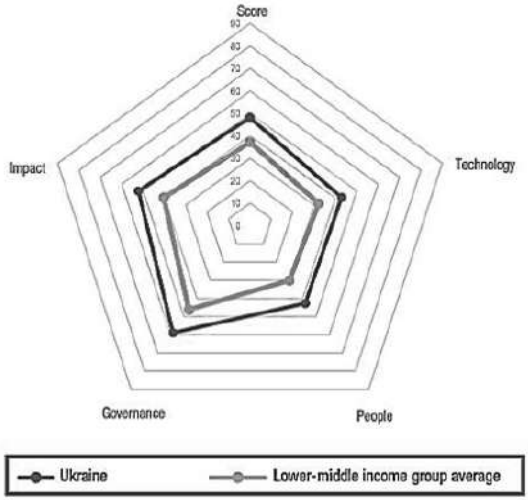

Figure 5. Performance Overview (Ukraine, 2019)

Source: The Network Readiness Index 2019 Ukraine (https://networkreadinessindex.org/countries/ukraine/)

The rapid, and sometimes drastic, transformation of methods and forms of work caused by the development of technology since the announcement of the Fourth Industrial Revolution at the Davos forum in 2016, has led to significant changes in the qualification requirements of relevant personnel. Data from the World Economic Forum in Davos shows that about 133 million new jobs are projected to be created by 2022 (Fig. 6)[253]

Digitalization of work processes, the widespread introduction of elements of artificial intelligence and other technological developments is gaining momentum. Along with this, the shortage of personnel for such processes is also increasing. Thus, it is necessary to review the professional profile of specialists with

[253] Jobs of Tomorrow: Mapping Opportunity in the New Economy, 2020. URL: https://www.weforum.org/reports/jobs-of-tomorrow-mapping-opportunity-in-the-new-economy/?trk=elevate_tw

the appropriate skills who will be able to occupy the appropriate jobs and perform the assigned tasks.

Table 1 - Top-ranked and bottom-ranked indicators of Ukraine

Strongest indicators	Rank	Weakest indicators	Rank
Adult literacy rate	1	Government online services	90
E-commerce legislation	1	Use of virtual social networks	92
Income inequality	1	Legal framework's adaptability to digital business models	93
Use of clean fuels and technology	1	Active mobile-broadband subscriptions	97
Tertiary enrolment	14	Availability of latest technologies	99
Fixed-broadband subscriptions	16	Happiness	100
Computer software spending	19	Rule of law	102
Professionals	29	Freedom to make life choices	105
Online trust and safety	32	Handset prices	107
Internet access in schools	40	4G mobile network coverage	119

Source: The Network Readiness Index 2019 Ukraine (https://networkreadinessindex.org/countries/ukraine/)

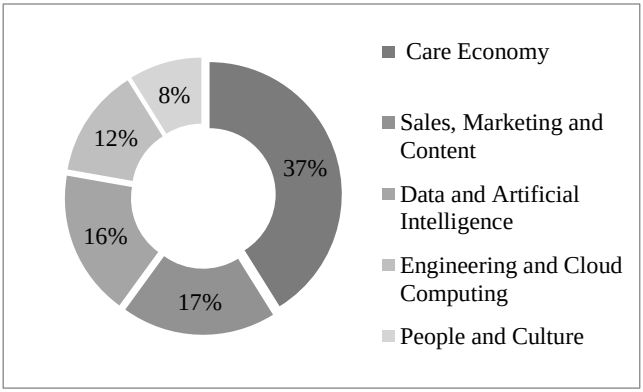

Figure 6. Areas of emergence of new professions according to the World Economic Forum in Davos

Source: Formed by author(s)

At the same time, the training of such specialists reaches a qualitatively new level, when the possession of certain highly specialized knowledge is combined with excellent communication skills, creative thinking and the ability to learn throughout life. So, the key to career growth is not only a person's understanding of the combination of skills that are most in demand and appreciated by companies, but also an understanding that the continuous transformation of modern information technologies leads to rapid changes in the most popular Top skills of the XXI century.

As noted by Bruce Anderson 2020 in the modern world, soft and hard skills are changing. Soft skills mainly focus on behavior and thinking, personal traits, and cognitive skills that can help a professional develop in a variety of roles and fields. Thus, if hard skills are understood as certain knowledge and abilities to perform a specific task, then the development of soft skills allows you to understand how to perform this task in the context of communication, coordination, cooperation and, as a result, making the necessary decisions.

In the context of changes that have occurred under the influence of quarantine restrictions caused by COVID-19, skills that include knowledge of software and technical abilities are increasingly in demand in the labor market. Their use, combined with the ability to organize a team in a remote work environment, is the key to maintain the company's competitive position.

Based on the results of research conducted by Burning Glass Technologies, a set of new skills that meet the requirements of the digital economy was identified (The new Foundational Skills of the Digital Economy, 2020). The study examined skills in the labor market based on a set of more than 150 million unique advertisements in the United States. 14 skills were identified as the main ones in the new economy and can be grouped into three groups: Human skills, Digital building blocks, and Business enablers (Fig.7).

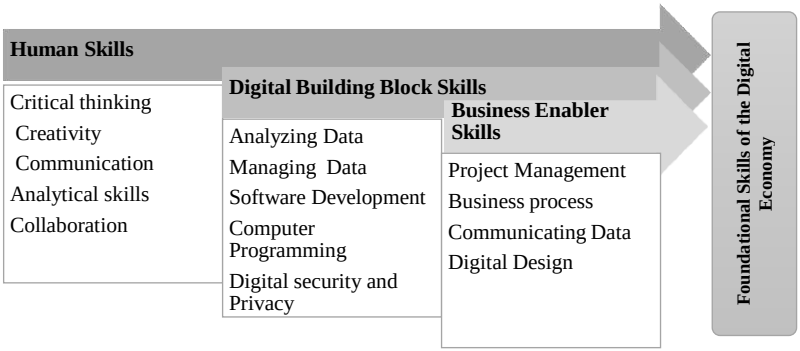

Figure 7. The New Foundational Skills of the Digital Economy
Source: Formed by author(s)

The first group include "soft skills" (critical thinking, creativity, communication, analytical skills, collaboration, and relationship building). The second group of skills is needed by analysts and data-driven decision makers. This group includes data analysis, data management, software development, computer programming, digital security and privacy. The skills of the third group are used in practical situations (project management, business processes, data transfer, digital design)[254].

If we conduct a comparative analysis of the top-10 most popular hard skills worldwide and the top-5 most popular soft skills according to LinkedIn data for 2019 and for 2020 (Fig.8), we can see how the development of technologies affects the requirements for specialists.

From Fig.8 it is also clear that the list of the most popular soft skills is consistently headed by creativity. However, lets also note changes in the fifth position - emotional intelligence, a skill that is becoming more and more popular both in the professional sphere and in everyday life. As you can see, in 2019 According to LinkedIn, Cloud Computing, Artificial Intelligence, and Analytical Reasoning were among the most popular hard skills. While for 2020, the list

[254] The New Foundational Skills of the Digital Economy, 2020. URL: https://www.burning-glass.com/research-project/new-foundational-skills/

was headed by a skill that was not even considered before - blockchain.

Figure 8. The Most In-Demand Hard and Soft Skills of 2019 and 2020

Source: Formed by author(s)

In times of rapid changes, it is becoming increasingly difficult for specialists to maintain their competitive advantages without constant self-development and professional development. Thus, modern workers should be included in the lifelong learning process.

At this stage, the educational content offered by higher education institutions becomes important. The relevance of educational programs, their connection with the labor market and real business requirements become the key to successful professional realization of their graduates. To do this, educational institutions

need to implement a quality assurance policy in accordance with Standards and guidelines for quality assurance in the European Higher Education Area (ESG), form an internal quality culture and build communication channels with all their stakeholders, both internal and external. ESG contains a generalized set of standards and recommendations for internal and external quality assurance systems of Higher Education, a kind of reference point for both higher education institutions (in the context of the quality of training and educational services), and for institutions involved in the development and implementation of education quality assurance policies in general[255].

It should also be noted that Paris Communiqué, signed as a result of the conference of Ministers of education of the countries participating in the European Higher Education Area (Paris Communiqué, 2018), notes the need for cooperation for search and application of innovative teaching and teaching practices for the further development and implementation of student-oriented learning and the principles of open education in the context of lifelong learning. The communique also notes the importance of creation and development of curricula to ensure a variety of methods and flexible forms of learning that will further promote both social mobility and continuous professional development[256].

In the context of updating of educational programs, it is necessary to establish relations between the educational institution that offers educational services and business structures that are potential employers for graduates of these institutions. This process should be based primarily on mutually beneficial terms. Managers of both large and small companies are interested in obtaining specialists who, after completing the relevant training program, are ready to perform the tasks set, make decisions within their authority and be responsible for the relevant decisions. For successful professional

[255] Standards and guidelines for quality assurance in the European Higher Education Area, 2015. URL: https://enqa.eu/index.php/home/esg/

[256] Paris Communiqué, 2018. URL: http://ehea.info/page-ministerial-conference-paris-2018

growth, specialists are expected to show creativity and leadership qualities. In the context of a pandemic, professional and emotional stability skills are also becoming popular.

Today, majority of business structures have their own training programs for specialists, which are aimed not only at professional training, but also at retraining graduates of higher educational institutions who do not have the necessary set of skills. At the same time, they show readiness to be included in the educational process even at the stage of formation of a future specialist in order to improve training programs, include the necessary professional competencies, as well as practical skills, taking into account current trends and requirements. However, the effectiveness of such a process will depend on the willingness of all parties to cooperate, the presence of common interests and the desire to find compromises in solving the issues raised. Equally important are the development of mechanisms for effective cooperation based on compliance with the sequence of actions, commitment, implementation of selected obligations and self-discipline. Thus, interaction between educational institutions and businesses should be based on the principles of strategic partnership.

It should be noted that the state also plays a significant role in the process of establishing such interaction. Namely, the existence of a clear state policy and its unconditional compliance at all levels of implementation of the educational process. Today, a significant number of domestic and foreign publications are devoted to the issue of interaction in the system of relations "Education-Business-State", because the economic development of the state depends, among other things, on the activities of enterprises, organizations, institutions and companies. The success of the latter depends on many factors, which are based on a professional who is able to produce ideas, develop implementation mechanisms and implement them. And it is universities that are the intellectual and professional center that is able to create an appropriate atmosphere and offer new non-standard solutions and projects that can be implemented on the basis of a partner company.

In recent years, the involvement of employers in the implementation of the educational process has been rapidly gaining momentum, in particular, due to the state policy in the field of higher education and certain criteria for ensuring the quality of Higher Education. More and more enterprises in the country are entering into an open dialogue with universities to jointly find ways to improve existing educational training programs, adapt them to the real requirements of the labor market and adjust their content to develop the necessary competencies. To achieve this goal, events of various scales are held annually: All-Ukrainian business forums and conferences, local meetings within the framework of seminars, round tables, etc.on the basis of relevant higher educational institutions, visits to enterprises together with students, etc. The results of such meetings, as a rule, are the achievement of certain agreements (signing of the contracts, memorandum of cooperation, etc.), which are further implemented through cooperation in organization of practical training for students and improvement of the skills of teachers. Today, there is an increasing demand for such types of employers attraction, namely: holding competitions for business ideas, startups, where talented students can receive funding for the implementation of the presented projects; organization of open lectures to discuss modern topics and solve specific real cases. This format allows you to develop the creative potential of students, encourage them to engage in cognitive and research activities with the support and advice of leading specialists in a particular field, and, as a result, commercialize the results obtained. However, it should be noted that the choice of a partner university as a platform for generating ideas and creating real projects, as well as the reverse process – involvement of business representatives in the educational process – should take place on the basis of in-depth analysis. Understanding the goals and priorities of each interested party is the basis for effective cooperation. To do this, at the stage of the "birth" of the idea of partnership, as noted by Lars Frelund, Max Riedel and Fiona Murray, business organizations need to assess the readiness of the parties for productive interaction. The authors have developed a

special form called “University partnership canvas”, which contains 6 questions[257]:

1. What business goals define your partnership with the University?
2. What are the main activities of your partnership with the University and how do they ensure compliance with your business goals?
3. Who are your main partners and by what criteria were they selected?
4. What forms of cooperation correspond to your areas of activity and business goals?
5. What people, processes, and organizational structures support your partnership with the University?
6. What performance metrics are most useful for evaluation of your partnership?

The answer to these questions will allow you to determine the prospects for cooperation, set clear requirements for the qualification of graduates and attract talented specialists to implement your business strategy.

In this context, the international community, as noted in the Paris communique, is ready to provide full support to educational institutions to develop and improve their own programs and strategies for the development of learning and teaching (Paris Communiqué, 2018). At the same time, the involvement of students in the innovative activities of their educational institutions can be implemented by creating interdisciplinary educational programs or implementing a dual form of training, in which academic training is enhanced by real experience and training directly at the workplace. The latter, despite its long existence in the world’s leading educational institutions, is only gaining momentum in Ukraine. Since 2019, 44 educational institutions of higher and vocational education have participated in a pilot project to train dual-form specialists in 53

[257] Lars Frølund, Fiona Murray, and Max Riedel Developing Successful Strategic Partnerships with Universities, 2017. URL: https://sloanreview.mit.edu /article/developing-successful-strategic-partnerships-with-universities

specialties with the involvement of leading IT companies, enterprises in the banking, design, food and agricultural sectors[258].

On the other hand, such institutions as Quality assurance agencies, whose creation and operation are also provided for by the ESG (Standards and guidelines for quality assurance in the European Higher Education Area, 2015), also act as partners in the quality assurance process. The activities of these agencies are designed to help higher education institutions assess the effectiveness of internal quality assurance systems, including the involvement of employers as partners in the educational process. To do this, educational institutions apply to the relevant agencies with a request to conduct an expert examination of a separate educational program, or activities in general, by involving independent experts. The latter get acquainted with the information provided by the institution in accordance with the established form, and make a visit directly to the institution of Higher Education. Upon completion of familiarization with the existing internal processes and procedures, the involvement of all interested parties, experts form clear recommendations for improvement, development and positioning of the relevant educational program in the market of educational services, as well as the Internal Quality Assurance System of the institution's activities in general.

In the face of uncertainty and constraints caused by the COVID-19 pandemic, the issue of quality of education and necessary procedures has become the number one issue of all quality assurance agencies around the world. Examples of the activities of quality assurance agencies and real-world cases of work adaptation to the current conditions are published by the European Network for Quality Assurance in higher education (External quality assurance in the time of COVID-19, Case examples from ENQA member agencies, 2020). Among them, as an example, the case of the National Agency for quality assurance of higher education of

[258] Міністерство освіти і науки України «У 44 закладах стартував пілотний проєкт із впровадження дуальної освіти – він триватиме до 2023 року», 2019. URL: https://mon.gov.ua/ua/news/u-44-zakladah-startuvav-pilotnij-proyekt-iz-vprovadzhennya-dualnoyi-osviti-vin-trivatime-do-2023-roku

Ukraine (NAQA), whose activities are aimed at formation of a culture of quality of education[259].

According to the specified information, with the introduction of quarantine restrictions in the country and the ban on holding public events, the agency's activities were switched to remote mode using information technologies (External quality assurance in the time of COVID-19, Case examples from ENQA member agencies, 2020). The NAQA also decided to develop a procedure for conducting virtual visits to institutions and ensuring that accreditation examinations are conducted via the Internet. For this purpose, a temporary procedure for conducting an accreditation examination using technical means of video communication was developed (A temporary procedure for conducting an accreditation examination using technical means of video communication, 2020), which was later given effect by a government decision. In accordance with a certain procedure, familiarization with the institution of Higher Education, meetings with its management and all groups of interested parties takes place online. To provide information support, NAQA has developed communication channels through its official website and social networks (Facebook)[260].

Thus, modern conditions require urgent actions and management decisions to adapt working and learning conditions, taking into account external factors, as well as digitalization of the educational process and the skills of all its participants. To ensure quality, higher education institutions must create conditions for the formation of specialists with a set of skills that are required in the modern digital economy. To do this, it is necessary to understand the importance of XXI century skills development by the teaching staff, and, as a result, to review the methods and forms of education. Also, close cooperation with business goals coordination and expectations

[259] Strategy of the national agency for higher education quality assurance to 2022, 2019. URL: https: https://en.naqa.gov.ua/wp-content/uploads/2020/04/Strategy-to-2020.pdf

[260] External quality assurance in the time of COVID-19 Case examples from ENQA member agencies, 2020. URL: https://enqa.eu/wp-content/uploads /2020/06/External-QA-in-times-of-COVID-19_case-examples.pdf

in the context of training, internships, and work skills development will ensure not only the coordination of educational content, but also the formation of talented young people capable of performing new jobs in the digital and network economy.

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DISTANCE LEARNING: A CHANCE OR A HEADACHE?

Barabas Dmytro,
Smakohrai Maksym

With the advent of the possibility to receive information in electronic form, a person strives to improve and enhance this process. The volume of information grows constantly, the speed increases and new ways of receiving and exchanging data appear. New interfaces with which it is convenient to interact and perceive this information are created. Society is increasingly interacting with them because of the convenience, speed of search, wide availability, huge and free choice of sources, independence and security. It is impossible not to take this into account in training, where obtaining and processing of information is an important stage. The development of the information society contributes to the establishment of virtual reality as a socially important phenomenon. Intensive development of virtual reality technologies is conditioned by real needs in transition from actual to virtual ways of information transmission and mastering in society for managing the consequences of information explosion, i.e. processing of media texts presented in the format of numerical data, printed or hypertext, video or audio texts, etc.[261]

The pandemic, which covered the world like a tsunami, destroyed, among other things, the work of education systems in developed and developing countries. As a consequence, the segment of higher education faced the need to urgently introduce revolutionary changes in the processes of education and administration. The real challenge is faced by educational institutions that have closed their audiences. Will traditional universities be able to adapt by choosing the right technologies and approaches to teaching and attracting their students? After all, university students are mature enough to handle the complexities of the Internet and

[261] *Kirtman L.* Online Versus In-Class Courses: An Examination of Differences in Learning Outcomes. Issues in Teacher Education. 2009. Vol. 18, № 2. Pp. 103-115.

smart enough to navigate on new educational platforms[262]. Taking into account these trends, virtualization of education is becoming one of the most obvious trends in the educational process.

The impact of the pandemic has been dramatic and transformational, and educators are trying to create effective short-term solutions for distance teaching and learning, especially in emerging markets where students face additional funding and infrastructure challenges.

As long as the world continues to fight the epidemic, universities are following WHO recommendations by closing campuses and introducing online education. Zhejiang University (ZJU), with seven branches in Zhejiang Province in eastern China, has actively joined the world's largest experiment to introduce distance learning. As part of the educational quality assurance process, ZJU organized a series of training sessions for 3670 teachers in mid-February. The developer of one of the university's most popular MOOCs was invited to demonstrate how he adapted pedagogy to online learning and created a strong sense of community among online students. To minimize the impact of the outbreak, ZJU officially launched online teaching on February 24. Emergency education covers all students at Zhejiang University, including international students, and many courses are open to students around the world. Two weeks after the start of the "experiment," the university offered more than 5,000 courses for both undergraduate and graduate students. ZJU Learning Center attracted 570,000 visits, and DingTalk ZJU, an application jointly developed with Alibaba, recorded a total live audience of 300,000. Meanwhile, about 2500 postgraduate students who are graduating from the university, from spring can apply for oral online protection according to the curriculum[263].

[262] Kandri, Salah-Eddine. How COVID-19 is driving a long-overdue revolution in education / Salah-Eddine Kandri. 2020, 12 May // https://www.weforum.org/agenda/2020/05/how-covid-19-is-sparking-a-revolution-in-higher-education/

[263] Wu Zhaohui. How a top Chinese university is responding to coronavirus. 2020, 16 March // https://www.weforum.org/agenda/2020/03/coronavirus-china-the-challenges-of-online-learning-for-universities

Now video conferencing applications such as Zoom and WebEx allow universities to survive. However, faculty is still trying to maintain the same depth of interaction with students that they might have in the classroom. They need to find a solution - and quickly - to avoid reducing the quality of education they provide. Online educational platforms such as Coursera can play a useful role by using their experience in online program design, technology platform selection, and digital marketing to find the best content for traditional users. The transition to an online format has been unprecedented in recent months. In the short term, teachers are using "first aid" solutions because of quarantine, moving from personal communication to remote training instructions. But they quickly realize that distance learning is only the first step in the long journey to offering online education that will include effective tools to attract students and enhance teachers' skills. Some partnerships between universities, online education providers, and technology providers may continue beyond the pandemic.

The topic of mass open online courses or MOOC (Massive open online courses) has become extremely topical today. This is an online training course with the possibility of free participation and open registration, published curriculum and open results. As a complement to traditional course materials such as videos, texts and homework, mass open online courses allow the use of interactive user forums that help to create and maintain communities of students, teachers and assistants. These courses are also designed by the best teachers from around the world, which breaks down the geographical boundaries of quality education and is especially relevant for regions that have low levels of educational development. The most striking examples of effective work of such courses are such American companies as Coursera, EdX, Udacity. Ukraine has its own MOOC platform since 2014, which is called Prometheus. Users of this platform can learn in several areas: economics, political science, programming, engineering and technology, etc. Ukraine is still on its way to master MOOC technologies, but there are already the first results and they are positive. Prometheus allows everyone to study in the best teachers of our country. This significantly improves

the system of self-study of students and complements the traditional education system. A promising area of development of this idea is the creation of the so-called "Mixed Courses". The introduction of such a system will allow a student of a certain university to listen to the discipline not only from the teacher who works in this university, but also from any other teacher of the country who has offered his lectures on Prometheus, or any other MEP platform. The student then receives a certificate indicating that the student has taken this course of lectures from a particular faculty member. Of course, this system requires changes in legislation, but the prospect of introducing such technologies is positive. Another question is that online courses or MOOC become yesterday's word in education. In the near future they should be replaced by adaptive learning systems, capable to adapt to the individual characteristics of the student: the residual level of knowledge, gaps, the most acceptable pace of learning, personal preferences and motivations, etc. A part of such functionality has already been implemented on such foreign language learning portals as lingualeo.com or duolingo.com[264].

Many students have found it impossible to attend offline classes at schools, universities, educational courses, etc. At the same time, some of the offline students did not show a desire to switch to online education, although most of them found the idea logical and chose online education. A good example is Home School Company.This is a school of foreign languages in Ukraine, which offers both offline classes and activities, and online. In early March 2020, the government of Ukraine introduced a strict quarantine throughout the country due to the spread of Covid-19. As a result, the school's offices were closed. According to the surveys conducted on March 21, 2020 among 127 respondents who are students of the school with offline attendance, only 97 expressed a desire to continue their studies online and only 85 actually made the transition, and a month later 17 of them also left the school, arguing that it is inconvenient to study online. 68% of the students who

[264] Барабась Д., Джафаров Д., Шпак І. Освітні інновації та їх імплементація в Україні. Науковий вісник Одеського національного економічного університету. Науки: економіка, політологія, історія. 2016. – № 3 (235), С. 47-48.

dropped out of online study were over 45 years old. At the same time, only 2 students under 25 years of age left online education because of the inconvenience of online classes.

It is also worth considering many factors that cause such indicators (except banal unwillingness). Among them we highlight: general financial uncertainty, psychological instability, changing needs, reduced employment and loss of income, personal circumstances, and the possibility of self-education. At the same time, the number of students online (not including those who migrated from offline format) increased by 187% in the period from the end of March to May 2020 compared to the average growth for similar periods.

Virtualization of education allows solving a part of modern problems of educational institutions. That, in turn, causes necessity of research of its possibilities and restrictions. One of the problems of modern education is standardization of training programs which, on the one hand, simplifies educational process, allowing to train the mass consumer of an educational content rather effectively and with the minimum expenses. But at the same time issuing a single document confirming the appropriate level of knowledge and qualification with standardized education does not allow the consumer to choose the methodology, speed of delivery of material, its quantity, as a result of which its needs, psychological tendencies and abilities, as well as the already existing level of knowledge are not taken into account. Here we consider any educational institution as a dependent social institution, the purpose of which is financial gain or other social result (as in the case of state educational institutions). Dependence is manifested in government standardization, legislative regulation, and multiple and conflicting requirements of higher authorities and educational programs. This excludes any flexibility in curriculum design. Complex vertical hierarchies prevent any departure from the standard, with a significant discrepancy between the curriculum itself and the resources available (books, methods, and other resources on which the curriculum relies).

There is also the problem of choice. When choosing, for example, a faculty, we cannot know how a certain subject will be taught. Having read the guidelines, we will be able to present in some sense the methodology, the sequence of presentation of the material, but the way it will be interpreted by the instructor and communicated to students - is variable and depends on his experience, situation, etc.

Distance learning can partially solve both problems if it becomes an addition to the standard educational approach. Otherwise, distance learning expects the same fate as other forms of education, maximum standardization and dependence on the above factors. In addition, distance learning helps to attract additional funds as well:

1) maintenance of online platforms is relatively cheap;

2) it is cheaper than standard educational programs for the consumer;

3) it attracts a wider range of consumers;

4) it allows receiving knowledge remotely, which is especially popular and convenient for foreigners.

At the same time, we should not think that building and using distance learning systems is so cheap. To create favorable conditions for distance education, back in 1994, the European Commission launched the program "Leonardo da Vinci" with an initial budget of 4.1 billion francs. This program is designed to develop a system of "lifelong learning and new forms of training". The next Socrates program, with an initial budget of 5.64 billion francs, aimed to "give a European dimension to the acquisition of knowledge at home. In the UK, the TILT (Teaching with Independent Learning Technologies) project, with an initial budget of 8.9 billion francs, aims to create a wide network of non-government distance education. The World Association for Online Education (WAOE) was established to coordinate distance education activities[265].

Distance learning is more firmly entrenched in North America. 33 percent of all US students took at least one distance course as of

[265] Steve McCarty. Invitation to Join the World Association for Online Education // Online. - 16 may. - 1999. Url: http://www.mediagnosis.ru/mshsen/4-1.htm#_ftnref5

fall 2017, a rate double that of Canada. More than two-thirds of the respondents from the 172 Canadian institutions and the 112 US institutions in 2017 believed that online learning was either "Extremely" or "Very" important for their institution's long-term strategic plan (Fig. 1). Very few Canadian leaders believed that online education was only "Slightly" important (6% as compared to 9% for the U.S.), and no Canadian institutions reported the online was "Not at all important".

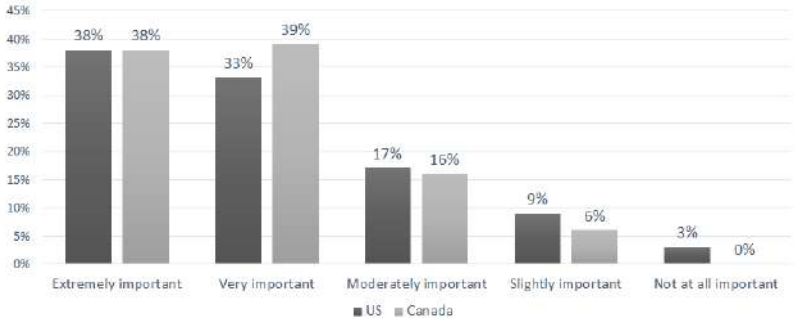

Figure 1. Importance of online learning for long-term strategic plan[266]

As of fall 2016, 6,359,121 students took at least one distance education course, comprised 31.6% of all higher education enrollments. This share represents the total number of students taking all of their courses at a distance, and those who are taking a combination of distance and non-distance courses. The proportion of the higher education student body taking advantage of distance education courses has increased every year. For example, it stood at 25.9% in 2012, 27.1% in 2013, 28.3% in 2014, and 29.7% in 2015[267] (Fig. 2).

[266] Allen, I.E., Seaman, J. Digital learning compass: Distance education enrollment report 2017. Babson Survey Research Group, e-Literate & WCET. 2017. Url: https://onlinelearningsurvey.com/reports/digtiallearningcompassenrollment2017.pdf

[267] The same

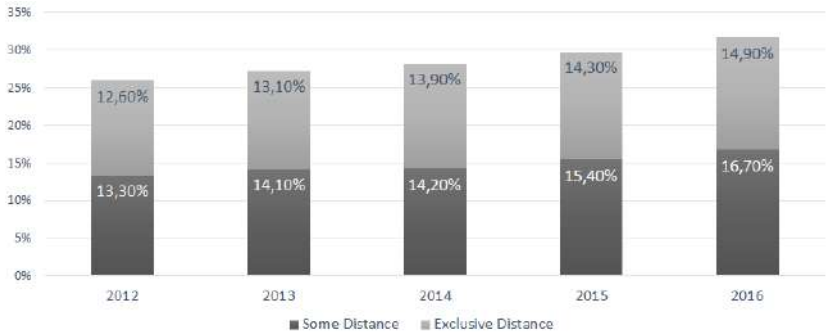

Figure 2. Percentage of students taking distance courses 2012-2016[268]

Results from Trends 2018 suggest that progress has been made. In the 2014-2016, digital learning reinforced its presence at higher education institutions. They reported a high level of general. The survey collected responses from higher education institutions from 38 systems in Europe. Trends 2018 Learning and Teaching in the European Higher Education Area acceptance of digital learning (93%), a more strategic use of it (87%), an integration into institutional strategies (85%), and its increased use in regular teaching (87%).

About half of the institutions also indicated developing more online learning for degree (49%) and non-degree purposes (52%) – which is relatively high, given that the sample consists mainly of conventional higher education institutions[269].

Given the fact that the Internet segment still contains a small share of the world market of higher education at $ 22000000000, - less than 2%, according to the firm HolonIQ - the market is ripe for

[268] Allen, I.E., Seaman, J. Digital learning compass: Distance education enrollment report 2017. Babson Survey Research Group, e-Literate & WCET. 2017. Url: https://onlinelearningsurvey.com/reports/digtiallearningcompassenrollment2017.pdf

[269] The same

an explosion[270]. Students' appetite for online offerings is only growing because of COVID-19. Even before the pandemic, many universities were seeing a decline in the number of offline students and a parallel increase in the number of their online courses. With COVID-19, we see how yesterday's destroyers can become lifesavers today. While traditional institutions viewed Internet education as a threat, it was their chance to survive.

Among a wide range of benefits of introducing and using distance learning are the most important:

- Flexibility and remoteness;
- Multifunctionality and multitasking;
- Interdisciplinarity;
- Wide availability;
- Customizability for the user;
- Affordable prices and convenience.

It is true that many of the world's leading high-tech companies have their own "industrial" virtual universities to provide continuous distance education and retraining of personnel. Companies that are actively investing in the development of virtual universities include: Microsoft, Oracle, Gartner Group, IMG Web, Street Technologies Learning, Cyber State, ZDNet, Logical Operations. "Academic" virtual universities (University of Western Governors, USA; World Lecture Hall, USA; California Virtual University, USA; International University, USA) and similar educational institutions in different regions of the planet (virtual universities in China, Belgium, Denmark, Germany, Mexico, Great Britain) are aimed at full-scale training of students in all necessary courses of their chosen specialty and obtaining a diploma recognized by all accredited universities and colleges. These and other virtual universities implement training courses and programs, there are virtual chairs, deaneries, laboratories, etc. The average age of students in virtual universities is 30 to 40 years or more, which is significantly higher than that of

[270] Kandri, Salah-Eddine. How COVID-19 is driving a long-overdue revolution in education / Salah-Eddine Kandri. 2020, 12 May // https://www.weforum.org/agenda/2020/05/how-covid-19-is-sparking-a-revolution-in-higher-education/

students in traditional universities and colleges (about 20-23 years)[271].

On the other hand, there are limitations in the use of distance learning in practice from the point of view of educational institutions, adding a headache to their management. In this case, the most significant are:

1. Complexity and cost of development;
2. The problem of embedding in the general system;
3. the need for constant improvements and additions;
4. Specificity of evaluation;
5. Limited results;
6. Additional costs for system maintenance.

From the point of view of end users of educational product restrictions include:

1. Inability or limited availability of technical resources;
2. Requires training to obtain certain skills;
3. A biased perception of training, for many people it does not seem serious;
4. Possible reduction (quantity and quality) of communications;
5. Not suitable for some fields of activity (medicine, jurisprudence, for example).

The crisis caused by the pandemic, showing the vulnerabilities and shortcomings of modern educational systems, should lead to their revival at a new level, when social distance, the prevalence of digital services, online communication will become the norm. More importantly, COVID-19 challenges deeply rooted ideas about when, where and how we deliver education, the role of colleges and universities, the importance of lifelong learning, and the difference between traditional and online students.

This pandemic has made people realize how much we depend on so-called low-skilled workers. During shutdowns, shorts, curfews, it is these workers who are on the front line, working through several changes to support delivery and take care of our basic needs. Over time, automation will come to these jobs. While the services

[271] Moore M. G.The theory of transactional distance // Handbook of distance education / ed. M. G. Moore. NewYork, 2013. P. 66–85.

provided by low-skilled workers will always be available, most new jobs will require higher skill levels. It is really important to develop and get new job skills in this changing world is not only a vital necessity; it is also an economic imperative.

The COVID-19 hit our education system like lightning and shook it to the ground. The crisis that emerged causes a significant transformation of the educational model.

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MANAGEMENT: STRATEGIC IMPERATIVES AND TRENDS OF TRANSFORMATIONS

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