

**THE INFLUENCE OF THE NEW
GENERATION OF COMMUNICATION ON
THE FORMATION OF THE FUTURE
ECONOMY**

Monograph

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10. FEATURES OF THE INFLUENCE OF THE 5G ECONOMY ON THE EFFECTIVENESS OF MANAGEMENT DECISIONS FOR THE DEVELOPMENT OF LOCAL COMMUNITIES

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Introduction. Ukraine's state policy in the field of local self-government is based primarily on the interests of local communities and provides for radical changes and systemic reforms, decentralization of power, ie the transfer of much power, resources and responsibility from the executive branch to local governments. The provisions of the European Charter of Local Self-Government and the best world practice of public relations in this area are the basis of policy.

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The need for a radical change in the structure of power and its territorial base at all levels, the implementation of real steps to stimulate the development of the country, the proper response to modern challenges required legislative action.

Literature review. Experts refer to the rapidly growing European sector digital market solutions and services of "cloud" technologies, provide the rate of increase of which in practice is quite problematic, therefore forecasts of leading analytical companies on trends in its development significantly different. Yes, the IDC European Managed Cloud study Services provides a holistic view of digital strategies and priorities market, covering the full life cycle of infrastructure services, from consulting and integration into management and support. The main ones are considered "managed cloud services" for private, public and hybrid deployment types that will provide companies that manage "Cloud" and infrastructure services, data and qualitative analysis to understand the requirements of the end user for next generation services, market dynamics and the development of a competitive environment.

Results. Information and communication technologies (hereinafter ICT) are present in almost every sector of the modern economy. They accompany both the professional and private spheres of a growing number of people. Just as the advent of the steam engine in the 18th century was a great leap forward in civilization, so today new technologies are an incentive for all kinds of industrial change. The particularly strong trend in the mobility of electronic services, which has been observed for several years, is gaining in importance. They are becoming part of the daily life of the "digital society" and are rapidly being used in the production process, in the media, in logistics, transport, healthcare, banking and, finally, in the public administration sector. This phenomenon is so obvious, and the positive impact of ICT on the economy has become so obvious that all these changes have been called the era of Industry 4.0. The Ministry of Digitalization has proposed its own concept of digital transformation of the economy, adapted to national specifics and international challenges - "Industry +" - which is to build an economy based on data.

"The systemic nature of decentralization reform determines the complexity of its impact on the systemic transformation of society. It is important to move from the "technocratic" narrow perception of decentralization as a process of changing the procedures for the formation and functioning of local governments to an integrated understanding of the place and role of these changes in building development processes at regional and national levels. Decentralization will remain a "thing in itself" with a rather narrow potential for qualitative changes until it is integrated into the overall processes of modernization of the country and society. At the first stage of

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the reform, additional opportunities were created for horizontal and vertical coordination of regional development management by strengthening the effectiveness of territorial communities, expanding strategy for community and regional development, financial and organizational tools for state regional policy. The expected administrative-territorial reform with the optimization of the redistribution of powers between levels of government and sectoral decentralization should logically "reset" the management verticals in the field of regional development. " [1]

The new Industry 5.0 concept emerged at a time when many European industries are reinventing themselves, adapting to the new reality of COVID, increasingly implementing digital and green technologies to remain a solution provider for all Europeans. Now is the time to make jobs more inclusive, build more sustainable supply chains and adopt more sustainable production methods. [2]

The development of cities and villages of Ukraine should guarantee a "civilized society" for their inhabitants, ie one that demonstrates a sufficiently high level of well-being, culture, education and technical development. The concept of "civilization" (from the Latin *civilis* - public, social, state, civil) was introduced into the scientific dictionary by the French educator Honore Gabriel Mirabeau (1757) and the Scottish philosopher Adam Ferguson (1767) as opposed to savagery. [2] However, the concept of "civilized man" in contrast to the savage has existed in science and politics since ancient Greece. Aristotle in his work "Politics" under civilization understood primarily "the ability to reason" [3, p.33] and "participation in courts and national assemblies" [3, p.67], ie the ability and ability to make decisions concerning the present and the future of the person and the community of which he is a member. If the inhabitants of the settlement cannot influence the activities of local authorities, participate directly in local self-government, it cannot be said that they live in a civilized society.

Ukraine has been experiencing a dynamically progressing process of computerization of the economy in recent years. This is a consequence of the development of ICT technology, including increasingly efficient computational methods working on large data sets, and the constant miniaturization, making ICTs more widely used in all areas of socio-economic life. ICT solutions that are entering the market are changing, in particular, in interpersonal contacts, the way of doing business, education, medicine, as well as in state and local government. ICT-based services create a new space not only for information, but above all for the production and distribution of goods and services.

In the coming years, we should expect further changes not only in the way we use the Internet, but also the content of the broadcast will take on a new dimension (it will cease to be purely informative, and more and more often it will be two-way

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interaction). Operators are already "enticing" with new services and offers that can be paid for by SMS or credit card via the Internet.

With the advent of more and more affordable smartphones and applications, increasing the availability of LTE technology, and soon 5G, the Ukrainian ICT market will enter a phase of significant transformation, becoming an important element in the development of "Industry +" on the ground.

The mobile state will play an important role in various sectors of the economy. When talking about mobile services, we must always keep in mind the two contexts of this mobility.

The system of European principles has acquired further systemic manifestation in the DSRD-2027 project. According to this project, the new regional development policy in Ukraine will be conducted in accordance with the principles[4]:

- subsidiarity, which is one of the key principles of development policy and provides that each action of individual policies is programmed and implemented at the lowest possible levels;

- an integrated territorial approach, which assumes that the object of regional policy is the territory, which is characterized by a specific set of social, spatial, environmental and economic characteristics. These characteristics determine the development potential of the region. An integrated territorial approach is to coordinate measures with the specifics of a particular area, so that it accurately meets the different development needs of this area;

- partnerships and cooperation related to building a culture of partnership and cooperation, which are focused on the interaction of citizens and public institutions for development. This principle is also used to build strong relationships of trust, both vertically between national, regional and local institutions and horizontally between local authorities and various stakeholders, including the private and social sectors;

- territorial and sectoral concentration, understood as directing regional policy interventions to support a limited number of territories. The development of each region is characterized by specific challenges, barriers or potentials, the development of which is particularly important in terms of cohesion of the region or country. Ensuring real territorial concentration means that the intervention area does not cover the whole region or country. In turn, sectoral concentration is the concentration of resources and activities on a limited list of industries and sectors that are priorities in terms of development of the country and individual regions. This rule means supporting those industries and sectors which, due to their potential, make it possible to identify the competitive advantages of this territory and are the driving force of economic development;

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- Evidence-based decision-making, which means that planned activities should be based on lessons learned, data collected, conclusions, recommendations, analysis and evaluation to ensure and maintain high standards of governance and implementation of regional policy. The implementation of this principle requires the functioning of appropriate specialized analytical tools, databases for policy formulation and evaluation;

- sustainable investment, which means cooperation and coordination in areas such as development planning, spatial planning, housing and transport policy, nature protection and air quality. This principle also helps to build a circular economy that maximizes resource efficiency and reduces waste generation. The goal of all these activities is to keep resources in the best condition for future generations. Sustainable investment meets the principle of sustainable and responsible development, in which the needs of the current generation can be met without reducing the future opportunities of generations, forming a relationship between economic competitiveness and care for the environment and quality of life;

- development of networks, which provides support for projects aimed at building networks of local communities, especially those that involve close cooperation between urban and rural areas;

- spatial planning, which ensures compliance of planning and implementation of programs and projects of regional development with the General scheme of planning of the territory of Ukraine. If these principles are taken into account in the text of the DSRD-2027, this document can be considered as an important step towards the Europeanization of Ukraine's regional development policy.

Research has shown that thematic principles of public investment can be structured in three areas:

1) coordination of public investment between levels of government and policy implementation; 2) increasing the capacity of public investment;

3) providing appropriate conditions for public investment at different levels of government. [5]

First of all, mobile communication is associated primarily with mobile communication networks, which today are viewed through the prism of smartphones, multimedia and data transmission. This allows users to enjoy a range of advanced services on the go, either through a web browser or through a special application installed on their phone. But there are also mobile computers that connect via WiFi or LTE with the appropriate services available on the network.

The second context, ie the use of different mobile solutions, where mobile becomes synonymous with wireless solutions that are used directly, e.g. in various production processes. It is about communication between sensors, recorders, labels,

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industrial devices and systems for information collection, surveillance, etc. In both cases, the same technical transmission solutions are used, which are usually classified as widely understood mobility.

European industry is a key driver in the economic and social changes we are currently experiencing. To remain the engine of prosperity, the industry must lead the digital and green transitions. Industry 5.0 provides an industry vision that not only focuses on efficiency and productivity as common goals, but also strengthens the role and contribution of industry to society.[6]

With the development of digital technology, new concepts of development, organization and implementation of industrial production are being developed. The most famous are: the German concept, known as Industrie 4.0, in France - Nouvelle France Industrielle, in the Netherlands - Smart Industry, in the UK - High Value Manufacturing Catapult (HVM Catapult), in Spain - Industria Conectada 4.0. Another approach to the fourth industrial revolution is Denmark, Sweden, Finland, Ireland and the Netherlands.

Natural industrial policy should naturally focus on those areas of support that require relatively low budget expenditures, and on projects where the potential return on investment is greatest (or there is full or partial funding from external donors). At the same time, the implemented measures should not distort trade conditions and competition. Measures aimed at preserving the "old" industry, as a rule, will not give enough return to justify state support. Public policy should not keep the industry behind, but instead should encourage an increase in the technological level of production in Ukraine. In particular, this is possible by supporting the implementation of Industry 5.0.

Experts from research and technology organizations, as well as financial agencies discussed the concept of Industry 5.0 during 2 virtual seminars on 2 and 9 July 2020. ESIR, a high-level expert group that advises on how to develop forward-looking and transformative research and innovation policies, is currently developing a new description of Industry 5.0 policy. It will provide concrete policy recommendations and actions to achieve the goals of Industry 5.0 and provide an important basis for promoting policy initiatives at European and national levels and ensuring that development is in line with the political priorities.

For the development of territorial communities in Ukraine, it is important to continue major reforms and management efforts to improve the investment climate. But this is not an obstacle to the implementation of effective management decisions for the development of local communities and the implementation of industry 3.0 / 4.0 and 5.0:

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The priority is to complete the work on formulating the Government's industrial policy. This can be done through the adoption of the Industrial Complex Development Strategy or other document that will formulate the government's position on industrial policy. Other government policy documents (current and draft) should be aligned with this concept of public policy.

State industrial policy needs to focus on improving the rules of the game not only for industry but also for the economy as a whole. It is a traditional set of reforms, such as the fight against corruption, judicial reform, modernization of the education system, development of the financial sector, improving the investment climate by reducing the regulatory burden on business and implementing transparent and equal rules of the game.

The main initiative should come from industrialists, but with the support of the state. National and regional 4.0 platforms need to be set up, following the example of EU countries, bringing together government institutions, businesses and academics. The national movement "Industry 4.0 in Ukraine" has already started this.

Given the limited budget funding, it is necessary to refrain from introducing large new programs of state aid to industrial enterprises in the form of tax benefits or direct subsidies. Instead, it is urgent to analyze the effect of existing benefits and draw conclusions about their feasibility. If there is a positive effect of state aid on the development of the industry, aid should be provided in accordance with the following principles: it should be received on time, for a certain period of time and targeted.

State aid to economic entities must comply with international obligations: it must not distort competition and foreign trade conditions. We need to work on expanding funding sources for innovative projects in industry. Today, the existing mechanisms of preferential financing are insufficiently used (for example, within the framework of the Horizon 2020 program), so it is necessary to analyze possible bottlenecks in the process.

It is necessary to support the creation of new enterprises and technological renewal of industrial SMEs. This area can be promising for attracting donor and public funds, for example, for technological audit of SMEs and support for startups. However, the ultimate responsibility for increasing the productivity of their production rests with the entrepreneurs themselves.

The positive impact of the Fourth Industrial Revolution and related new technologies will be fully realized through the large-scale deployment of 5G communications networks combined with other connectivity solutions. Key functional 5G drivers will open up a wide range of capabilities, including service optimization, decision making, and end-user experience. This will result in \$ 13.2

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trillion in global economic value by 2035, creating 22.3 million jobs in the global 5G value chain alone. [7]

Conclusions. Education, science and industrial policy - the development of industry in general and innovation in particular, require a careful overhaul of the education system in Ukraine. Technical universities should become an integral part of the innovation sector in the country with close ties to industrial enterprises. The reform of vocational education is important, which is designed to train qualified personnel for industrial enterprises (whereas there is now a significant gap in the skills acquired by graduates of vocational schools and needed by employers).

The Industry 5.0 approach contributes to three priorities: the "Economy that works for people", the "European Green Agreement" and the "Europe that is approaching the digital age".

Elements related to Industry 5.0 are already part of the main policy initiatives

- Adopting a human-centered approach to digital technologies, including artificial intelligence (AI Regulation Proposal)
- training and retraining of European workers, including digital skills (Skills Program and Action Plan on Digital Education)
- modern, resource-efficient and sustainable industries and the transition to a circular economy (Green Deal)
- a globally competitive and world-leading industry that accelerates investment in research and innovation (Industrial Strategy)

These are just a few examples of the strong link between the industrial transition and other developments in society.

REFERENCES

1. Децентралізація і формування політики регіонального розвитку в Україні : наук. доп. / [Шевченко О. В., Романова В. В., Жаліло Я. А. та ін.] ; за наук. ред. д-ра екон. наук Я. А. Жаліла. – Київ : НІСД, 2020. – 153 с.
2. Industry 5.0: Towards more sustainable, resilient and human ... URL: <https://ec.europa.eu>
3. Брайсон Д.М. Стратегічне планування для державних та неприбуткових організацій / Джон М. Брайсон. — Львів: Літопис, 2004. — 352с
4. У Мінрегіоні обговорили проєкт Концепції та план реалізації державної регіональної політики. 2020. URL: <http://www.minregion.gov.ua/press/news/u-minregioni-obgovorili-proekt-kontseptsiiyi-ta-plan-realizatsiyiderzhavnoyi-regionalnoyi-politiki/>

Monograph

5. Recommendation of the Council on Effective Public Investment Across Levels of Government. Adopted on 12 March 2014.
6. Industry 5.0 | European Commission. URL: <https://ec.europa.eu › info › in>.
7. The Impact of 5G: Creating New Value across Industries and ... URL: <https://www.weforum.org>