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Development of Modern Business Ideas and Technologies in Ukraine

Abstract. Introduction. Every year, the world has a lot of technology around us everywhere. What was previously thought to be a fantasy is now routine. What was previously thought to be a fantasy is now routine. The society tries to make its life easier by introducing technological progress into the revolution. Modern rates of scientific and technological progress and dependence of economic growth of leading countries and the world economy on efficiency of use of science and technologies have made necessary combination of efforts and resources of different countries for achievement of global scientific and technological goals.

Purpose. The purpose of the research is to analyze the development of modern business ideas and technologies in the economy of Ukraine and abroad.

Results. It has been established that Ukraine is still far behind economically developed countries of the world. The flow of investments into startups of Ukraine and the company was considered. It is well known that the USA is the main investor of the startup of the branch of our state and the catalyst for the development of the Ukrainian innovation environment. It is clear that Ukrainian industrial enterprises are gradually introducing innovative technologies into their activities and are moving to a more technological process of production, but given the changing Ukrainian economy, the instability of the financial market and the lack of state support for fundamental changes in the near future are not expected.

It has been proved that Ukraine is a great place for investments, as most startups, which are innovative companies in our country, with it inclination, and this industry is promising and will help our state to take a course in the direction of digitization of business and improvement of our innovative environment. It is justified that the state, based on the recommendations of science, is called on to send clear and clear signals to businesses on promising most important directions of production activity, to orient and direct its business activity in the direction required for the society, to indicate directions of overcoming the delay of our enterprises from the level of their foreign competitors.

Conclusions. Requirements of time, rapid development and introduction of modern ideas and technologies in practically all spheres of society cause economic entities at all levels of functioning to change their direction and activity in a qualitative way, to react to the challenges of the present time, to adapt and introduce new developments and technologies. In our opinion, it is the use of modern technologies, the newest ideas can become a catalyst for their development for domestic enterprises. As the global development is actively developing, innovative technologies become more popular, which not only accelerate all processes at the enterprise, but also minimize costs by introducing efficient use of resources into each of the processes.

Keywords: system thinking; creative thinking; creativity; system approach, higher education seekers.

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Розвиток сучасних бізнес ідей та технологій в Україні

Проаналізовано бізнес ідеї та новітні технології в Україні. Досліджено сучасний стан ринку світових технологій та проаналізовано його структуру. Визначено місце України в Глобальному рейтингу Індексу Інновацій за 2019-2020 роки. Проведено аналіз впливу технологій на розвиток сільськогосподарської та промислової галузей України та визначено тісний взаємозв'язок технологій і рівня експорту.

Встановлено, що Україна знаходиться все ще далеко позаду економічно розвинених країн світу. Розглянуто потік інвестицій в стартапи України та компанії. З'ясовано, що США являється головним інвестором стартап галузі нашої держави та каталізатором розвитку українського інноваційного середовища. З'ясовано, що Українські промислові підприємства поступово впроваджують інноваційні технології в свою діяльність та переходять на більш технологічний процес виробництва, проте враховуючи мінливість української економіки, нестабільність фінансового ринку та відсутність підтримки з боку держави кардинальних змін в найближчому майбутньому не очікується.

Доведено, що Україна є чудовим місцем для інвестицій так як більшість стартапів, які створення в нашій державі є інноваційними компаніями, з ІТ нахилом, а дана галузь є перспективною й допоможе нашій державі взяти у курс у напрям цифровізації бізнесу та покращення нашого інноваційного середовища. Обґрунтовано, що держава, ґрунтуючись на рекомендаціях науки, покликана своєчасно посилати бізнесу ясні й чіткі сигнали про перспективні найважливіші напрями виробничої діяльності, орієнтувати й спрямовувати його ділову активність в потрібне для суспільства русло, вказувати напрями подолання відставання наших підприємств від рівня їх іноземних конкурентів.

Ключові слова: новітні технології; інновації; АПК; промисловість; галузь економіки.

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Formulation of the problem. In connection with the development of information technologies, the role of information in the economy is growing rapidly and the ability to work with it becomes the most important factor of the enterprise competitiveness. The transformation of information into the most important resource of economic development has qualitatively changed its structure, which allowed to declare about the formation of a post-industrial economy. The information became an important object of business activity, and the share of the information market in the economy began to grow steadily. The challenges of the modern and the desire of the state to develop information in different spheres of life, economy, as well as the emergence of electronic business caused the relevance of technologies in the branches of economy. It should be noted that the innovation technology industry in Ukraine is developing most dynamically, among other sectors of economy and is extremely diverse – from advanced developments in the field of artificial intelligence, natural language processing, nanotechnology and cybersecurity to blockchain, FinTech, big data management, gaming, ag-tech and e-commerce.

Analysis of recent research and publications. Many national and foreign researchers have covered the issues of business ideas and modern technologies in the economy, including: A. Asaul, M. Voinarenko, L. Julia, L. Yemchuk, L. Scorpio, About. Mikoljuk [1], About. A. Klepikova [2], C. IN. Gurochkina, L. IN. Kravchenko [3] and many other economists.

Formulation of research goals. The purpose of the research is to analyze the development of modern

business ideas and technologies in the economy of Ukraine and abroad.

Outline of the main research material. Every year, the world has a lot of technology around us everywhere. What was previously thought to be a fantasy is now routine. The society tries to make its life easier by introducing technological progress into the revolution. Technology helps to save people's lives, because medicine is one of the main goals of creation. Now we no longer imagine our life without the equipment, which helps us in communication, work and just in everyday affairs [1].

The current pace of scientific and technological progress and dependence of economic growth of the leading countries and the world economy on the efficiency of use of science and technology have made necessary combination of efforts and resources of different countries for achievement of global scientific and technological goals [2].

Based on the data of research consulting company IDC, the world information technology industry will reach the mark of 5,2 trillion dollars by the end of 2022 [3]. Modern innovations promote accelerated globalization, open new opportunities for the social and economic development of TNCs, while they create serious problems that cause crises, generate poverty and inequality both within society and between countries.

Before proceeding to the analysis of innovation development of branches of economy we propose to study the place of our country in the sphere of world innovations, according to the report of the Global index of innovations as of 2019-2020 (fig. 1).

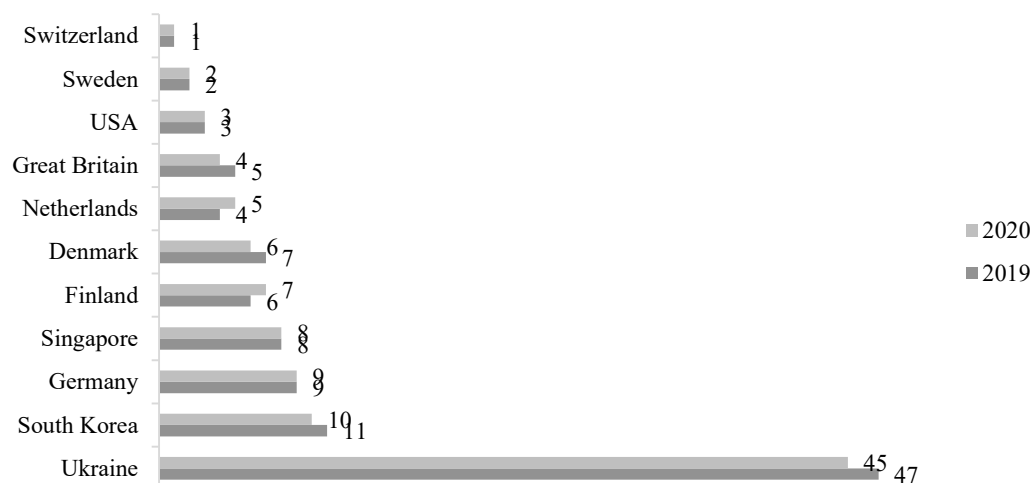


Figure 1 – The place of Ukraine in the Global Innovation Index for 2019-2020

Source: created by authors on the basis of materials [4, 5]

It should be noted that Ukraine is still far behind economically developed countries of the world. However, during the period of 2019-2020 it has increased by two points, which testify to revival of innovation development in our country, by strengthening cooperation with international partners in the field of startups and innovations.

The positive aspect is also the active development of the IT industry, which has grown in the Ukrainian economy 46 times over the last 17 years – from 110 million dollars in 2003 to 5 billion dollars in 2020. The average annual

growth rate of the Ukrainian IT industry is 20-25% and considerably outpaces the average growth rate of the industry in the world. Ukrainian IT industry has more than 4000 domestic and foreign companies. More than 110 leading global companies such as Samsung, Microsoft, Ring, Snap, Magento, Plarium, Boeing, Siemens, Ericsson have their R&D centers in Ukraine [19].

In Table 1, we propose to consider the flow of investments into the startups of Ukraine and the companies that made these investments.

Table 1. Volume of investments in Ukrainian startups by country, million US dollars

Start-up company	Amount of investments, mln USD.	Investor Company	The country of origin of the investor
Revolut	580	Technology Crossover Ventures	USA
Very Good Security	60	Vertex Ventures US	USA
Restream	50	Sapphire Ventures i Insight Partners	USA
Mobalytics	11,25	Almaz Capital	USA
Preply	10	Hoxton Ventures	UK
Allset	8,25	Greycroft	USA
MakeUp	8	Horizon Capital	USA
DMarket	6,5	Almaz Capital i Xsolla	USA
Zakaz.ua	5	Chernovetskyi Investment Group	Ukraine
Reface	5,5	Andreessen Horowitz i TQ Ventures	USA
AllRight	5	Genesis Investments	Ukraine
Liki24	5	TA Ventures, Genesis Investments i Mission Tech	Germany, Ukraine & Latvia

Source: summarized by authors according to [6]

In total, in 2020, the Ukrainian startup company made investments worth about USD 800 million. The main investor country was the USA, 91,2% of all investments

were made by US investment funds. Therefore, the USA is the main investor of the startup of the branch of our state

and the catalyst for the development of the Ukrainian innovation environment.

Ukraine is a great place to invest, as most startups that are innovative companies in our country, with it tilt, and this industry is promising and will help our state to take a course in the direction of digitization of business and improvement of our innovative environment.

The next one is to analyze the use of modern technologies by the branches of economy in Ukraine.

Ukrainian enterprises need to develop and introduce innovative technologies in their production, which minimize time losses and maximize overall productivity. We will consider in detail the main instruments of innovation development used by Ukrainian industrial companies for successful functioning in the Ukrainian and international markets (Table 2).

Table 2. Use of innovations by enterprises of the industrial sector of Ukraine

Company	Industry	Use of marketing DJs
Naftogaz	Gas and electricity production	The company has implemented SAP S/4HANA management system, which in the end should save time and money of Naftogaz, as an example of its foreign partners
IDS Borjomi Ukraine	Soft drinks	Created an application mywatershop - with which to order fast and convenient drinking water and a supplement Waterbalance, which helps people to monitor the water balance of the organism, according to their parameters
DTEK	Energy	The program was created by MODUS, one of the main results of which is the construction of underground communications infrastructure (Wi-Fi) at a depth of 500 m in the mine. This is the only project in Ukraine and one of the first in Europe.
DniproAZOT	Chemical	Production of nitrogen oxide recovery for automobile diesel engines on the basis of carbamide
Antonov	Aircraft construction	The DEVELOPED TANK (a non-pilot aviation complex), development of such projects as "Gorlytsia", "Strategic TANK", "Mishenyj complex", as well as various specialized modifications of aircraft

Source: summarized by authors on the basis of the analysis of information from the sites of the mentioned enterprises [9-13]

Ukrainian industrial enterprises are gradually introducing innovative technologies into their activities and are moving to a more technological process of production, but given the variability of the Ukrainian economy, instability of the financial market and lack of

state support for fundamental changes in the near future are not expected [7, c. 158].

Further, the analysis of innovative technologies used by enterprises of the agrarian sector is carried out (Table 3).

Table 3. Use of innovative technologies by enterprises of agricultural sector of Ukraine

Name of the enterprise	Industry	Directions
AgriChain	Agriculture	Uses the following it modules: Land Bank Management, Production Program Planning and Management, Yield Analysis and Forecasting, complex processes and Logistics Management and Business process Builder.
Syngenta	Agriculture	Created a program that allows to take pictures from the satellite and identify problem areas and on the basis of their analysis to make comprehensive reports on the condition of crops.
Kernel	Agriculture	Created an innovative agro-production system, DigitalAgriBusiness, where all information about the processes taking place in the fields was gathered. Agronomist collects information, and the system gives him the right decision to make fertilizers or to start sowing
NIBULON		Unique for Ukraine are schemes of acceptance and selection of samples from motor transport. The laboratory has the opportunity to simultaneously organize reception and selection of samples from three lines of motor transport, which allows to increase the speed of analysis without stopping of the load on determination of quality of grain and capacity of the terminal three times. Innovative products and technologies are constantly being tested, thanks to which the level of production remains stable high, etc.
Ukrlandfarming	Agriculture	Ukrlandfarming program controls the crop removal from fields to elevators and allows to get a complete picture of each crop for each region

Source: Summarized by authors on the basis of the analysis of information from the data sites of enterprises [14-18]

Achievement of multifunctional competitiveness of domestic companies on social, economic, ecological, innovation, information and other components should be the strategic goal of scientific and grounded economic policy. The state, based on scientific recommendations, is called upon to send clear and clear signals to businesses on promising most important directions of production activity, to orient and direct its business activity in a necessary direction for the society, to point directions of overcoming the delay of our enterprises from the level of their foreign competitors.

The main directions of innovation policy for domestic enterprises should include the following items:

- ensuring legal regulation of innovation development and protection of interests of its participants;
- direct and indirect support of industry in creation and development of innovations;
- identification and realization of the priority development of the industry sector;
- development of effective forms of partnership and cooperation, formation of appropriate organizational and economic structures in industry;

- training of personnel in the field of innovation activity for the industry;
- priority development of the material and technical base of the industry;
- development of international cooperation in the field of innovations.

Conclusions. Requirements of time, rapid development and introduction of modern ideas and technologies in practically all spheres of society cause economic entities at all levels of functioning to change their direction and activity in a qualitative way, to react to the challenges of the present time, to adapt and introduce new developments and technologies. In our opinion, it is the use of modern technologies, the newest ideas can become a catalyst for their development for domestic enterprises. As the global development is actively developing, innovative technologies become more popular, which not only accelerate all processes at the enterprise, but also minimize costs by introducing efficient use of resources into each of the processes.

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