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## **FEATURES OF THE INNOVATIVE DEVELOPMENT OF THE INDUSTRIAL SECTOR OF THE ECONOMY IN CONTEXT OF COVID-19 PANDEMIC**

The “Great Self-Isolation”, which manifested itself most actively in 2020, is accompanied by the most severe economic downturn. It covered 213 states, the number of cases in which as of July 21, 2020 is 14 885 965 people (the number of deaths is 614,060 people) [1]. A rare disaster has led not only to the tragic loss of large numbers of human lives, but also to a drop in global economic activity.

Our analysis indicates the presence of economic shocks, which we will consider in this article. First, it concerns the issue of supply and demand. According to experts from the International Monetary Fund, consumers are reducing their spending. This phenomenon leads to a decrease in the demand for goods and services in many industrial sectors. Thus, in the UK, 69% of companies report a drop in demand for their goods and services. The trend was largely reflected in the development of small and medium-sized businesses (77% of enterprises with an annual income of 62 million US dollars) [2]. For large enterprises this figure is 64%. Most of the enterprises have difficulties with value chains. For example, in the PRC, domestic sales of Hyundai Motors fell 97% in February 2020 compared to the same period in 2019. This phenomenon has led to the fact that many enterprises were forced to reduce production. So in March 2020, the drop in total US industrial production occurred by 5.4%.

World Bank experts note that falling demand and disruptions in supply chains have led to a fall in energy prices – by 18.4% (Q1 2020). It should be noted that in the United States from March 29 to April 4, 2020, the demand for electricity decreased by 5.7% compared to the same period last year (the minimum value of demand over the past 16 years) [3].

In March, world oil prices decreased by 50% compared to January 2020. Gas prices fell from 12% (USA) to 25% (European countries). Coal prices decreased by 5-17%, copper and zinc – by 15%; iron ore – by 7%, platinum – by 23%. This price decline leads to a complete or partial cessation of activities in the extractive industry. At the moment, mining at copper mines (15%) and zinc mines (20%) is fully or partially stopped.

Due to the situation that arose, the enterprises began to redesign production. The “General Motors” company, which specializes in the production of automobiles, has produced 30,000 artificial lung ventilation devices. The facility was awarded a \$ 489 million contract with the US Department of Health and Human Services.

The introduction of quarantine measures had an impact on the organization of work in enterprises. Before the introduction of quarantine measures, the industrial sector employed 2.7 billion people (81% of the total world labor force) [4]. The crisis led not only to a decrease in labor activity, but also in working hours (in the second quarter of 2020 – by 6.7%). In addition, many companies, trying to keep the number of employees, were forced to resort to lower wages. Thus, the company “Tesla” (USA) has cut the salaries of vice presidents by 30%, heads of departments – by 20%, ordinary employees – by 10%.

Another example is the Japanese automakers, which sent 10,000 hourly workers on unpaid leave at three factories in the United States. Also closed the plant for the production of cars of the “Subaru” company. In France, automakers were forced to temporarily close the factories of “Peugeot”, “Renault”, “Citroën”. In Slovakia, the “Kia Motors” automobile plant was closed.

COVID-19 has impacted other industries as well. For an indefinite period in India suspended the production of electronics “Xiaomi”, “Samsung Electronics”, “LG Electronics”.

Exhibitions and events, which represent one of the ways to promote goods and services, conclude new contracts and make investments, were among the most affected areas of activity from COVID-19. According to data released by the European Alliance of the Exhibition Industry, at the time of the pandemic, 3 300 events (European states) were cancelled or postponed. Despite the start of easing

quarantine measures, most European countries have banned major events until the end of August 2020. According to the World Association of the Exhibition Industry, the cancellation or postponement of exhibitions will result in losses of 134.2 billion euros in the form of outstanding contracts.

According to UNCTAD, the negative consequences of the spread of COVID-19, as well as a set of measures taken by states, will reduce the global flow of foreign direct investment by 40%. In particular, industrial production and the mining industry will be the most affected. Conversely, an increase in income in the information and communication sectors of the economy is expected.

Industrial enterprises of the world have developed measures aimed at improving the current situation. According to the PWC source, they are divided into groups: change in labor safety requirements – 77%; re-equipment of workplaces, provision of distancing – 65%; preservation of remote working methods for some employees – 55%; automation of labor – 40%, as well as reduction of working areas – 38% [5]. In addition, innovation has always been an important tool in the fight against unemployment and poverty reduction. Particular attention should be paid to the development of special forms of organizing innovation activities – industrial parks.

Today there are more than 20 thousand industrial parks in the world. So, for example, the largest number of industrial parks is concentrated in countries such as the United States – more than 400 industrial parks, the Turkish Republic – 263 industrial parks, the Socialist Republic of Vietnam – 200 industrial parks, the Hungarian Republic – more than 200 industrial parks, Germany – 200 industrial parks, the Arab the Republic of Egypt – 119 industrial zones, the Czech Republic – 100 industrial parks, the Republic of Poland – more than 69 industrial parks, the People's Republic of China – 54 industrial zones, Ukraine – 56 industrial parks. Of these, 43 are included in the Register of Industrial Parks of Ukraine.

Consider an example of the development of industrial parks in the PRC and in Ukraine. On the territory of the PRC, 54 industrial zones form about 10% of the gross domestic product. They also accumulate 30.0% of direct foreign investments in the development of enterprises located on the territory of the industrial park. Products

manufactured by enterprises in the industrial park account for 37% of the country's merchandise exports.

The most interesting example is the Sino-Singapore Industrial Park “Suzhou City - Singapore”. Its territory covers an area of 260 km<sup>2</sup>, on which 330 companies (79 of the largest corporations in the world) are located, employing 35 thousand people. The volume of attracted investments – 100 billion dollars USA.

The peculiarity of the functioning of the industrial park is that it is an object of joint development of the PRC and Singapore (shares are distributed as follows: 52% of the shares belong to a consortium of Chinese companies, 28% – to the Singapore consortium, 10% – to “The Hong Kong and China Gas Co., Ltd.”, 5% – “Singapore CPG Corporation Pte., Ltd.”, 5% – “Suzhou New District High-tech Industrial Stock Co., Ltd.”).

Another example is the Chinese-Belarusian industrial “Great Stone” with a total area of 112.5 km<sup>2</sup>. The project is being developed within the framework of interstate Chinese-Belarusian cooperation and the signed relevant intergovernmental documents. Any company, regardless of the country of origin of the capital, can act as residents of the industrial park. A favourable investment climate has been created for residents of the industrial park, guaranteed both by national legislation and by special international agreements and obligations.

As part of the implementation of state policy in the PRC to support enterprises in industrial parks, programs such as “Key Technologies”, “Key Laboratories”, “Program 863”, “Fakel”, “Iskra”, “Plan 2020”, “Made in China – 2025” and others [6, 7].

Unlike China, Ukraine as of 01.05.2020 included 43 industrial parks in the Register of Industrial Parks. Management companies have been identified in 17 industrial parks, and there are members in 7 industrial parks.

Financing the development of the infrastructure of industrial parks included in the Register, as well as creating conditions for their functioning, is possible at the expense of the State Fund for Regional Development. In 2018-2019 the Fund financed one regional development project for the formation of the infrastructure of industrial parks (order of the Cabinet of Ministers of Ukraine dated May 23, 2018 No

372-r (as amended by the Cabinet of Ministers of Ukraine order dated July 11, 2018 No 479-r) in the amount of UAH 5.175 million. It is planned to implement 5 projects (UAH 75 million) in 2019-2020. Note that the work on the preparation of design, estimate documentation, land acquisition and other activities necessary for the creation and operation of industrial parks is financed from local budgets and extra-budgetary sources of funding.

The main normative legal acts regulating the process of creation and functioning of industrial parks in Ukraine include: Law of Ukraine “On Industrial Parks” dated June 21, 2012 No 5018-VI; Order of the Cabinet of Ministers of Ukraine “On Approval of the Concept of Establishing Industrial Parks in Ukraine” dated 01.08.2006, No 447; Resolution of the Cabinet of Ministers of Ukraine “On approval of the Procedure for making a decision on the inclusion of an industrial park in the Register of industrial parks” dated January 16, 2013 No 216; Order of the Ministry of Economic Development and Trade of Ukraine “On Approval of the Form of the Model Agreement on the Creation and Operation of an Industrial Park” dated 15.04.2013 No 386; Resolution of the Cabinet of Ministers of Ukraine “On approval of the list of projects in priority areas of socio-economic and cultural development” dated 08.12.2010 No 1256; Customs Code of Ukraine (Art. 287) dated 13.03.2012, No 4495-VI; Resolution of the Cabinet of Ministers of Ukraine “On the Procedure for Approving Lists of Equipment, Equipment and Components, Materials that are not produced in Ukraine, which are not excisable goods imported into the customs territory of Ukraine by initiators of the creation of industrial parks – business entities, management companies of such parks for their arrangement and participants of industrial (industrial) parks for the implementation of economic activities within the specified parks and exempt from duty” dated June 19, 2013 No 558 [8].

At the moment, the government of Ukraine has taken the following key measures to support business during the quarantine: individual entrepreneurs are temporarily exempted from calculating and paying a single social contribution; a moratorium was introduced on conducting business inspections by regulatory authorities; no fines will be imposed for violations of tax legislation; during the quarantine period, there is a ban on eviction of tenants for non-payment of utilities,

and fines and penalties for non-payment of utilities are not charged; individuals are exempt from paying fines and penalties for violations of consumer lending agreements; employees of small and medium-sized enterprises, for whom the employer retains jobs, can receive partial unemployment benefits; banks are prohibited from increasing interest rates on loans; payments on mortgage loans have been deferred, and banks are prohibited from levying execution on mortgage objects due to non-payment of payments under mortgage agreements; legal entities and individual entrepreneurs are exempted from paying land tax or rent for a land plot.

Promising forms of scientific and technical cooperation are being implemented between Ukraine and the PRC. These are Ukrainian-Chinese centers and technology parks (cities of Jinan, Harbin, Shanghai). The first Ukrainian-Chinese Park of high-tech cooperation was opened in the city of Jinan (2002). The purpose of its activities is the transfer of high technologies joint development of scientific and technical projects and their implementation in production; creation of joint ventures for the sale of science-intensive and high-tech products.

In 2003, the Ukrainian-Chinese Center for Welding and Related Technologies was opened in Harbin. A cooperation agreement was signed between the Institute of Electric Welding. Paton National Academy of Sciences of Ukraine and Harbin Institute of Welding. Also, in 2011, a new Ukrainian-Chinese Technopark was opened in the city of Shanghai, which is engaged in research in the maritime sector and technologies [9]. And in 2012, the Ukrainian-Chinese Center for Technology Transfer in the field of shipbuilding and ocean design was opened in Zhenjiang. In 2016, in the city of Harbin, the "Chinese-Ukrainian Center for Scientific and Technical Cooperation" was created, representing a platform for scientific cooperation in certain areas, in particular in the field of electric welding.

Strengthening Ukrainian-Chinese cooperation in the direction of organizing special forms of innovative activity not only makes it possible to preserve them, but also contributes to their growth. They can enhance bottom-up action by supporting the development of small knowledge-based firms and venture capitalists; to promote professional development of specialists in the field of production of high technology products and high technologies.

In order to promote the development of Ukrainian industry on an innovative basis, we propose to look at unfinished regulatory and legal documents, restore those that are relevant, and also develop new state target programs. According to the Concept for the creation of industrial parks, approved by the order of the Cabinet of Ministers of Ukraine No 447-r. of August 1, 2006, in our country, the development of this type of activity was started, a mechanism and sequence of actions for the implementation of state policy in the field of creation and development of industrial parks was determined, broad opportunities were guaranteed to stimulate investment and innovation in Ukraine.

In 2012, the Law of Ukraine “On Industrial Parks” was registered. In order to further develop industrial parks in Ukraine, a legislative package was adopted in the first reading (No 2554 a-d and No 2555 a-d), which introduces tax and customs investment incentives for new domestic industrial enterprises [10]. Out of the existing package of incentives, this legislative package provides for the application of only some tax preferences, including: exemption for five years from income tax and a half rate (9%) for the next five years, subject to reinvestment of these funds in the development of production; exemption from import duties on equipment and equipment for the implementation of economic activities; instalment plan for five years of import value added tax on equipment and equipment for carrying out economic activities within the industrial park, etc. At the same time, the draft legislative package (No 2554 a-d and No 2555 a-e) contains clear norms of direct action, which require: the implementation of specialized production and research activities; on the territory of the industrial park, there should be an official employment mechanism with less than 30 employees; the average monthly wage must be at least three minimum wages, that is, more than UAH 11.1 thousand. The implementation of these directions, contributing to the creation and development of a network of industrial parks on the territory of Ukraine, to intensify investment activities, to promote an increase in direct investment, to stimulate the development of the real sector of the economy, will predetermine the creation of new high-tech industries and jobs, an increase in the volume and range of export-oriented products.

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