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## **ANALYSIS OF THE VOLUME OF CAPITAL INVESTMENTS OF ENTERPRISES IN UKRAINE**

The article is devoted to the assessment of the investment process in Ukraine. For the analysis, the indicator "volume of capital investments" was used, which characterizes the expenses of legal entities and individuals for the acquisition, production or creation of tangible and intangible non-current assets. According to the results of the analysis of the volume of capital investments made by Ukrainian enterprises in various types of tangible and intangible assets, it was established that from 2014 to 2019, their constant growth took place with an average growth rate of 24.3%. However, the negative consequences of the COVID-19 pandemic and the full-scale invasion of the Russian Federation into Ukraine led to a sharp reduction in the volume of capital investments. The dynamics of the volume and specific weight of capital investments in the section of large, medium and small enterprises of Ukraine were studied. It was established that medium and small enterprises in the process of developing capital investments made most of them in machines and equipment, while large enterprises invested more actively in the construction and reconstruction of buildings. It is noted that although large enterprises have more opportunities to increase the amount of capital investment in the purchase of software compared to medium and small enterprises, it still remains at a low level, which in 2022 decreased by 73% to UAH 1.4 billion. It is argued that despite the difficult situation in Ukraine, today it is important to increase the volume of investments in software, which is potentially beneficial for all types of enterprises, regardless of size. It is recommended that Ukrainian businesses abandon the software products of the aggressor country and make capital investments in alternative domestic or international products, since in any case Russian software will be banned or will simply cease to function in Ukraine.

**Keywords:** capital investments; volume of capital investments; capital investments in tangible assets; capital investments in intangible assets; entrepreneurship entities; analysis of the volume of capital investments.



**Problem Statement.** Capital investments play an important role in ensuring the effective functioning of enterprises as they contribute to solving both strategic and tactical business development tasks in competitive market conditions. They are one of the key factors of economic growth and should always be at the center of investment policy, which in turn must correspond to the specific conditions of present-day Ukraine. Therefore, analyzing the volume of capital investments made by Ukrainian enterprises as an effective tool for information support of the management process at both macro and micro levels has significant theoretical and practical importance.

**Analysis of Recent Research and Publications.** Capital investments are the subject of scientific research by many scholars, including I. O. Blank, O. I. Hrytsai, V. I. Donenko, L. D. Zabrodska, O. V. Zinkevych, O. K. Kushnir, M. V. Lyvdar, N. A. Mazur, I. V. Molchaniuk, D. V. Okara, K. V. Palyvoda, V. H. Chernyshev, O. M. Chubka, and others. A significant portion of their work is devoted to the analysis of capital investments. However, in the current conditions of the state of war in Ukraine, these issues require additional research, as Ukraine's economy faces serious challenges due to Russian aggression, which need to be thoroughly analyzed and critically evaluated.

The aim of the article is to analyze the volume of capital investments made by Ukrainian enterprises in various types of tangible and intangible assets across large, medium, and small enterprises in Ukraine.

**An overview of the main material.** Investments are a key economic category and play an extremely important role both at the macro and micro levels. Among them, capital investments are a special type of investment. Despite the vast amount of work by domestic scholars aimed at researching the essence of capital investments, consensus on its interpretation has not yet been achieved. Ambiguity in interpreting the concept of «capital investments» is also evident in regulatory acts.

In our opinion, the most meaningful definition of capital investments is «investments in the acquisition or production by one's own efforts for own use of tangible and intangible assets, the useful life of which exceeds one year» [1]. Based on this, the main criteria for classifying an investment as capital is that the assets in which the investment is made are intended for personal use for a period exceeding 12 months.

For the analysis of the investment process, the indicator «volume of capital investments» is applied, which characterizes the expenditures

of economic entities and individuals on the acquisition, production, or creation of tangible and intangible non-current assets [2].

It is worth noting that in practice, for informational support of the analysis of trends and structure of capital investments, the formation of the mentioned indicator occurs in such breakdowns: 1) by sources of financing; 2) by types of assets; 3) by types of economic activity [2].

Within this study, indicators of the volume of capital investments formed during the state statistical observation process were analyzed in terms of asset types, namely:

capital investments in tangible assets (in land; in existing buildings and structures; in construction and reconstruction of buildings; in machinery and equipment);

capital investments in intangible assets (in concessions, patents, licenses, trademarks, and similar rights; in the acquisition of software).

It is well known that economic growth depends on the development of both large and medium-small businesses. In this regard, we consider it appropriate to analyze the volume of capital investments of enterprises with a breakdown into large, medium, and small enterprises.

It should be noted that the definition of small, as well as large and medium-sized entrepreneurship entities, is considered in Part 3 of Article 55 of the Economic Code of Ukraine. Also, at present, in Article 2 of the Law of Ukraine «On Accounting and Financial Reporting in Ukraine», there is also a distinction between enterprises by categories (micro-enterprises, small, medium, large), which is made based on three indicators: the balance sheet value of assets, net income from the sale of products (goods, works, services), average number of employees.

Continuing the research, we will analyze the dynamics of the volume of capital investments of Ukrainian enterprises for 2012–2022 (Fig. 1). It should be noted that: 1) the indicators presented in the figures and tables of this article do not include the results of banks' activities and budgetary institutions; 2) for 2014–2021, the data is presented without the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol, and parts of the temporarily occupied territories in Donetsk and Luhansk regions; 3) the data for 2022 is presented without taking into account the temporarily occupied territories by the Russian Federation and parts of the territories where (were) hostilities were taking place.

As seen from Figure 1, starting from 2014 until 2019 inclusive, there was a continuous increase in the volume of capital investments of



Ukrainian enterprises. During this period, it almost tripled: from 178 billion UAH in 2014 to 524 billion UAH in 2019. The average growth rate was 24.3%.

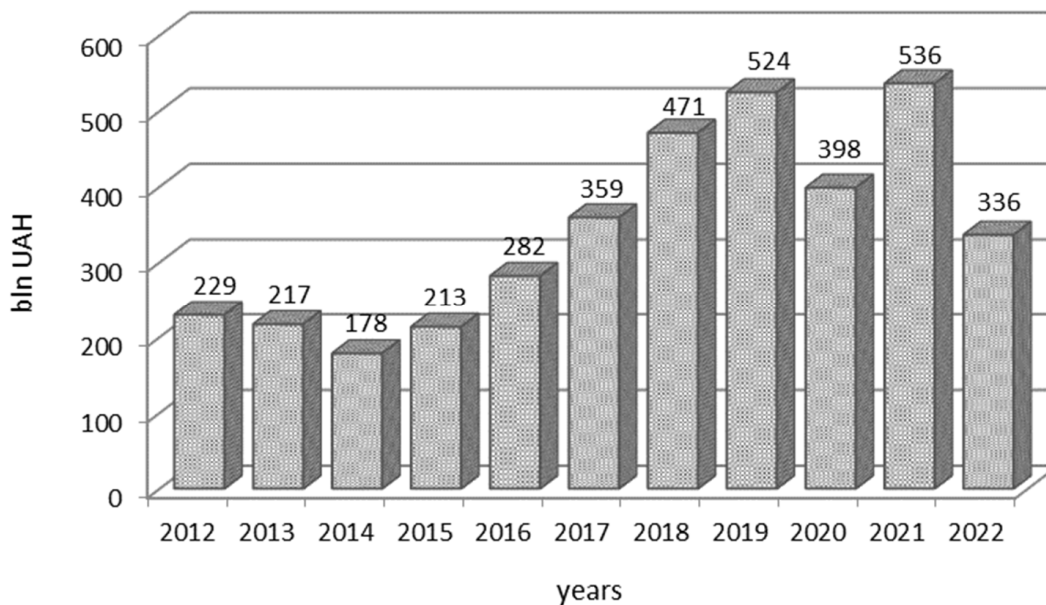


Fig. 1. Dynamics of the volume of capital investments of enterprises in Ukraine for 2012–2022

Source: constructed by the authors based on [3]

In 2020, the negative effects of the COVID-19 pandemic led to a sharp reduction in the volume of capital investments by 126 billion UAH or 24.0%. However, in the subsequent reporting period, the investment activity of enterprises significantly improved. Thus, in 2021, compared to 2020, the volume of capital investments increased by 138 billion UAH or 34.6%, which is the highest growth rate for the period under study. At the same time, the absolute value of this indicator exceeded the pre-pandemic maximum level and amounted to 536 billion UAH.

Thus, in 2021, positive dynamics towards an increase in the volume of capital investments formed after the shock of the COVID-19 pandemic. Based on scientific research, it could be reasonably expected a rapid recovery of Ukraine's economy as part of the global economic environment in the near future [4].

However, with the beginning of the full-scale invasion of the Russian Federation into Ukraine, the processes of capital investment by enterprises significantly slowed down. In 2022, compared to 2021, the volume of capital investments decreased by 200 billion UAH or 37.3% and amounted to 336 billion UAH. The sharp decline in the ability to finance capital projects, caused by military aggression, was primarily

associated with the exacerbation of problems of non-payment, insufficient funding, logistics disruption, increased risks, lack of human capital, occupation of territories where enterprise assets are located, business uncertainty, inflationary processes intensification, deterioration of the financial condition of enterprises, and other factors.

In the next stage of the research, we will consider the dynamics of the volumes and share of capital investments in large, medium, and small enterprises in Ukraine for 2012–2022. (Table 1).

Table 1

Dynamics of the volume of capital investments with the distribution of large, medium and small enterprises of Ukraine for 2012–2022

Enterprises	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Large</b>											
bln UAH	115	104	87	99	109	139	217	240	190	263	150
%	50,0	48,0	48,9	46,5	38,6	38,8	46,1	45,8	47,7	49,1	44,5
<b>Medium</b>											
bln UAH	78	74	63	78	113	139	170	200	164	198	132
%	34,0	34,2	35,4	36,7	40,1	38,8	36,1	38,1	41,1	36,8	39,2
<b>Small</b>											
bln UAH	37	39	28	36	60	80	84	84	45	75	55
%	16,0	17,8	15,7	16,8	21,3	22,4	17,8	16,1	11,2	14,1	16,3
<b>Total, bln UAH</b>	<b>229</b>	<b>217</b>	<b>178</b>	<b>213</b>	<b>282</b>	<b>359</b>	<b>471</b>	<b>524</b>	<b>398</b>	<b>536</b>	<b>336</b>

Source: built by the authors based on [3]

As evidenced by the data in the table. 1, during 2012–2022, the majority of all capital investments were made by large enterprises. The only exceptions are 2016, when the capital investments of medium-sized enterprises were UAH 4 billion or 1.5% more than those of large enterprises, and 2017, in which the volumes of capital investments of these business entities were the same.

As for the dynamics of the volume of capital investments, it was heterogeneous during the studied period. It can be stated that the largest growth of this indicator was demonstrated by: small enterprises in 2015–2017 (128.6%, 166.7% and 133.3%, respectively); large enterprises – in 2018 (156.1%); medium-sized enterprises – in 2019 (117.6%) (Fig. 2).

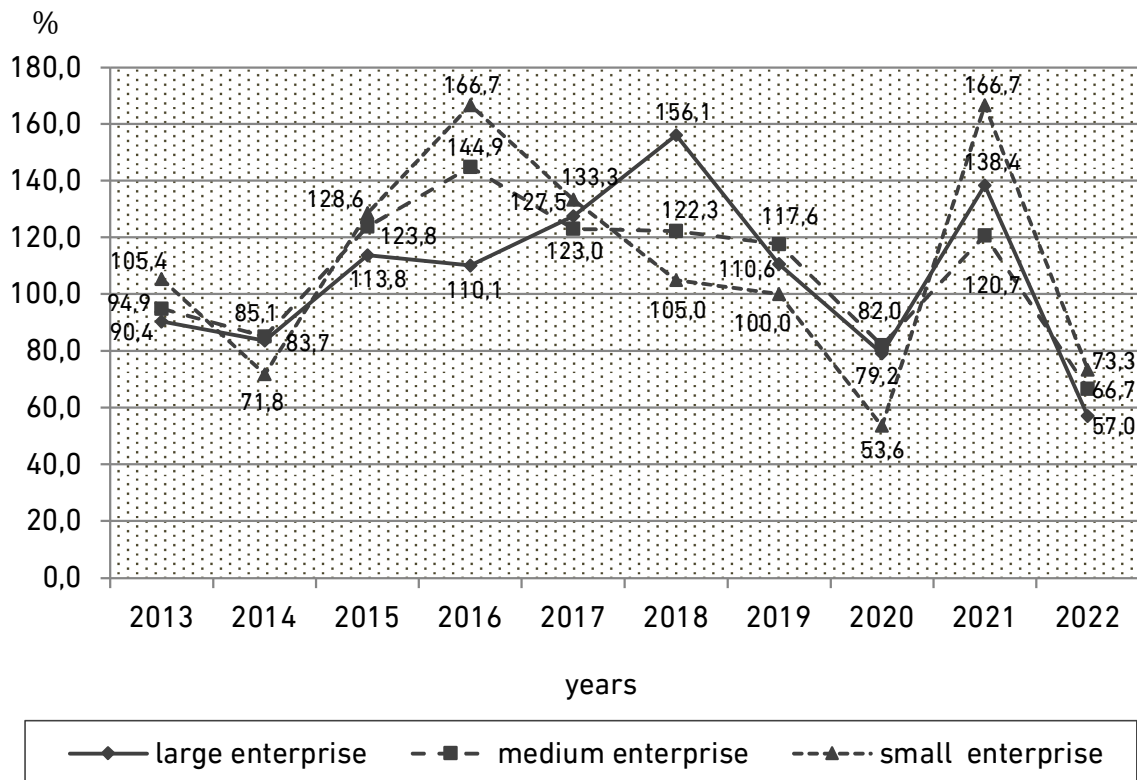


Fig. 2. Rates of growth (decline) in the volume of capital investments of large, medium and small enterprises of Ukraine for 2012–2022

Source: built by the authors based on [3]

Since the beginning of the COVID-19 pandemic, small enterprises were the most vulnerable, the rate of decline in the volume of capital investments in 2020 amounted to 46.4%. At the same time, already in 2021, the speed of recovery of the investment process of own business by these business entities compared to other enterprises was the highest and amounted to 166.7%.

The war in Ukraine radically affected the volume of capital investments of all enterprises, and, first of all, large ones. If the rate of reduction of this indicator in small and medium-sized enterprises in 2022 was 26.7% and 33.3%, respectively, then large enterprises reduced investment in their business by 43.0%.

Analyzing the dynamics of the volume of capital investments in tangible and intangible assets with the distribution of large, medium and small enterprises in Ukraine for 2012–2022, it should be noted that they mainly fall on investments in the construction and reconstruction of buildings, as well as in machines and equipment (Table 2).

Table 2

Dynamics of the volume of capital investments in tangible and intangible assets with the distribution of large, medium and small enterprises in Ukraine for 2012–2022

Enterprises	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Capital Investments in land, bln UAH</b>											
large	0,4	0,1	0,2	0,1	0,1	0,4	0,2	0,5	1,1	1,4	0,3
medium	0,6	0,4	0,4	0,5	0,7	0,5	0,7	1,0	0,8	0,9	0,5
small	0,7	0,6	0,4	0,5	0,7	1,0	0,8	0,8	0,4	0,4	0,1
<b>Capital Investments in the acquisition of existing buildings, bln UAH</b>											
large	1,3	0,4	0,3	0,3	1,2	0,4	2,7	1,9	0,8	1,8	0,4
medium	1,8	2,1	1,3	2,1	2,8	3,0	5,4	4,8	3,2	3,0	1,4
small	2,2	2,1	1,1	2,5	4,0	2,8	2,4	3,8	0,8	1,2	0,5
<b>Capital investments in construction and improvement of buildings, bln UAH</b>											
large	50,5	50,8	46,4	44,3	51,9	58,7	84,5	100,2	84,0	111,0	53,0
medium	33,3	28,1	25,7	28,5	35,9	37,6	54,4	75,8	51,8	69,6	34,7
small	19,4	21,8	13,8	12,9	17,8	24,5	27,2	28,8	15,1	24,7	17,3
<b>Capital investments in machinery and equipment, bln UAH</b>											
large	54,8	42,1	34,7	37,5	46,0	66,1	96,9	114,9	83,7	120,3	65,5
medium	36,0	37,1	29,6	40,5	64,0	86,5	94,8	88,6	87,5	99,7	78,7
small	13,2	12,8	11,5	18,3	35,2	48,3	49,5	41,1	25,7	44,4	33,3
<b>Capital investments in concessions, patents, licences, trade marks and similar rights, bln UAH</b>											
large	1,6	3,8	1,0	10,4	1,7	2,7	20,6	4,8	1,3	2,7	0,4
medium	1,8	1,5	1,8	1,6	2,0	2,1	2,6	2,0	2,3	2,6	2,5
small	0,1	0,2	0,1	0,2	0,2	0,5	0,4	0,4	0,1	0,5	0,1
<b>Capital investments in purchased software, bln UAH</b>											
large	1,4	1,5	1,3	2,3	2,7	4,0	3,2	4,0	4,0	5,1	1,4
medium	0,5	0,5	0,5	0,8	1,0	1,2	1,7	1,4	1,8	3,8	2,0
small	0,2	0,2	0,1	0,2	0,2	0,4	0,5	0,4	0,4	0,7	0,7

Source: built by the authors based on [3]

Thus, during the studied period, large enterprises invested in these assets 98% of all their capital investments, medium-sized enterprises – 95%, small enterprises – 97%. At the same time, large enterprises made the largest part of their investments in the construction and reconstruction of buildings, while medium and small enterprises invested mainly in machines and equipment (Fig. 3, 4).

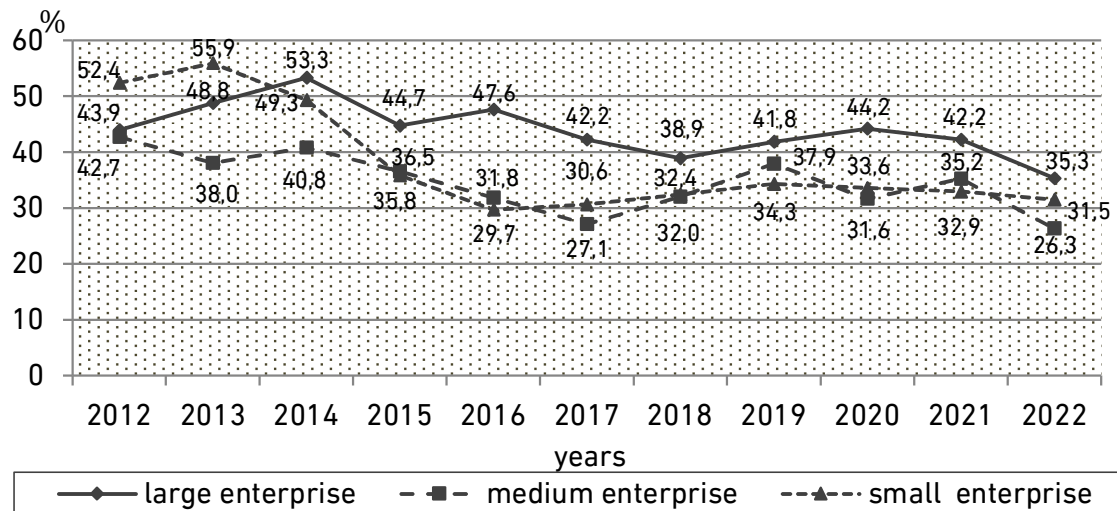


Fig. 3. Dynamics of the specific weight of capital investments of enterprises in the construction and reconstruction of buildings for 2012–2022  
Source: built by the author based on [3]

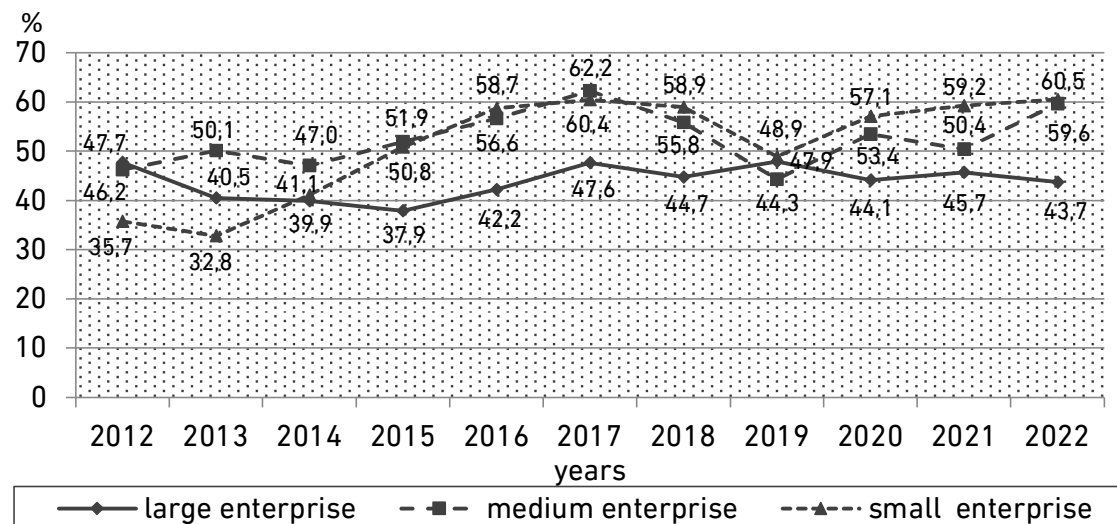


Fig. 4. Dynamics of the share of capital investments of enterprises in machinery and equipment for 2012–2022

Source: constructed by the authors based on [3]

The maximum volume of capital investments in construction and reconstruction of buildings, made by large enterprises, was in 2021 and amounted to 111.0 billion UAH. In our opinion, this investment sphere should be a priority, as it contributes to the development of the construction industry, which has a multiplier effect, increasing the number of jobs and promoting the development of energy, mechanical engineering, metallurgy, metalworking, woodworking industry, production of building materials, glass production, transportation, etc. At the same time, it provides potential for the development of medium and small businesses, primarily those engaged in specialized



construction works (glazing, plastering, painting, finishing works, sound insulation, external territory cleaning, etc.), production of building materials, furniture, warehousing, transportation activities, etc.

However, in 2022, the volume of capital investments in construction and reconstruction of buildings made by large enterprises decreased by more than half to 53.0 billion UAH, accounting for 35.3% of all capital investments of large enterprises.

The maximum volume of capital investments in land during the period was only 1.0 billion UAH in medium and small enterprises and 1.4 billion UAH in large enterprises. In 2022, it significantly decreased and amounted to 0.3, 0.5, and 0.1 billion UAH in large, medium, and small enterprises respectively.

Regarding the volume of capital investments in purchasing software, it can be argued that they reached their maximum in the pre-war 2021, when large enterprises invested 5.1 billion UAH, medium-sized enterprises – 3.8 billion UAH, and small enterprises – 0.7 billion UAH in this asset category.

It is obvious that today the use of software is a necessary condition and an important tool for the development of any enterprise, as it allows them to quickly and actively adopt advanced innovative technologies, maintain stable market positions, and gain high competitive advantages. Although large enterprises have more opportunities to increase the volume of capital investments in purchasing software compared to medium and small enterprises, it still remains at a low level, which unfortunately decreased by 73% to 1.4 billion UAH in 2022.

We believe that today, despite the current challenging situation in Ukraine, it is important to increase investments in software, which is potentially beneficial for all types of enterprises, regardless of their size.

In this regard, it is worth noting that despite the sanctions imposed against the Russian Federation in response to the military aggression against Ukraine, a large number of domestic enterprises continue to use Russian software for business management. However, this is quite dangerous, as it is associated with risks of hacking attacks, espionage, data deletion, cessation of updates, prohibition of use under Ukrainian law, etc. Moreover, the use of software of Russian origin entails financing of military aggression against Ukraine.

Therefore, we recommend that Ukrainian businesses do not hesitate but decisively get rid of software products from the aggressor country and make capital investments in alternative domestic or international products, as in any case, Russian software will either be



banned or simply cease to function in Ukraine. At the same time, we advise to choose companies-developers that have experience and reputation in implementing software products.

Thus, capital investments in the acquisition and updating of software will provide businesses with a number of key advantages and enable them to get maximum returns from its application.

**Conclusions.** The research has established that from 2014 to 2019, there was a consistent increase in the volume of capital investments made by both large and medium-sized and small enterprises, which is an important condition for the development of the Ukrainian economy. The analysis conducted provides grounds to assert that medium and small enterprises, in the process of capital investments, allocated a larger portion of them to machinery and equipment, while large enterprises were more actively invested in construction and reconstruction of buildings. Under the influence of adverse factors such as the COVID-19 pandemic and the full-scale invasion of the Russian Federation into Ukraine, the volume of capital investments significantly decreased for all types of tangible and intangible assets.

Despite the challenging situation in Ukraine associated with the imposition of martial law, both large and medium-sized and small enterprises are recommended to dispose of software of Russian origin and make capital investments in alternative domestic or international products.

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## **АНАЛІЗ ОБСЯГУ КАПІТАЛЬНИХ ІНВЕСТИЦІЙ ПІДПРИЄМСТВ УКРАЇНИ**

Статтю присвячено оцінці процесу інвестування в Україні. Для аналізу застосовувався показник «обсягу капітальних інвестицій», який характеризує витрати юридичних та фізичних осіб на придбання, виготовлення або створення матеріальних і нематеріальних необоротних активів. За результатами аналізу обсягу капітальних інвестицій, здійснених підприємствами України в різні види матеріальних та нематеріальних активів, встановлено, що, починаючи з 2014 р. і до 2019 р. включно, відбувалося їх постійне зростання із середнім темпом приросту 24,3%. Проте негативні наслідки пандемії COVID-19 та повномасштабне вторгнення Російської Федерації в Україну призвели до різкого скорочення обсягу капітальних інвестицій. Досліджено динаміку обсягу та питомої ваги капітальних інвестицій у розрізі великих, середніх та малих підприємств України. Встановлено, що середні та малі підприємства у процесі освоєння капітальних інвестицій більшу їх частину здійснювали у машини та обладнання, тоді як великі підприємства більш активно вкладалися в будівництво та перебудову будівель. Зазначається, що хоча великі підприємства і мають більше можливостей нарощувати обсяг капітальних інвестицій у придбання програмного забезпечення порівняно із середніми та малими підприємствами, проте він все ж залишається на невисокому рівні, який у 2022 р. скоротився на 73% до 1,4 млрд грн. Стверджується, що попри складну ситуацію в Україні, сьогодні важливо нарощувати обсяг інвестицій в програмне забезпечення, що є потенційно вигідним для всіх типів підприємств, незалежно від розміру. Рекомендовано українському бізнесу відмовлятися від програмних продуктів країни-агресора і здійснювати капітальні інвестиції в альтернативні вітчизняні чи



**міжнародні продукти, оскільки у будь-якому випадку російський софт буде заборонений або просто перестане функціонувати в Україні.**

**Ключові слова:** капітальні інвестиції; обсяг капітальних інвестицій; капітальні інвестиції в матеріальні активи; капітальні інвестиції в нематеріальні активи; суб'єкти підприємництва; аналіз обсягу капітальних інвестицій.

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