





DOI: 10.46340/eujem.2023.9.6.3

MODELING THE IMPACT OF DIIA CITY ON IT BUSINESS ACTIVITIES IN UKRAINE

Andrii Polchanov¹ , D.Sc. in Economics, Nataliia Vyhovska² , D.Sc. in Economics, Iryna Lytvynchuk³ , PhD in Economics, Oleksii Polchanov⁴ 

¹ Department of Finance and Digital Economy, Zhytomyr Polytechnic State University, Ukraine

² Department of Finance and Credit, Zhytomyr Polytechnic State University, Ukraine

³ Department of Finance and Credit, Zhytomyr Polytechnic State University, Ukraine

⁴ Department of Finance and Digital Economy, Zhytomyr Polytechnic State University, Ukraine

Corresponding author: Andrii Polchanov; Email: polchanov@gmail.com

Citation: Polchanov, A., Vyhovska, N., Lytvynchuk, I., Polchanov, O. (2023). Modeling the Impact of Diia City on it Business Activities in Ukraine. *European Journal of Economics and Management*, 9, 6, 24-33. <https://doi.org/10.46340/eujem.2023.9.6.3>

Abstract

The article studies the influence of the special tax regime Diia City on the activity of IT business in Ukraine. The results of the analysis of literary sources proved insufficient attention of scientists to the issue of quantitative assessment of changes from the transition of IT business from the general taxation system to Diia City, which determined the purpose of the article.

With the help of economic and statistical methods, the key performance indicators of enterprises engaged in computer programming (the predominant type of economic activity in the IT industry of Ukraine) were analyzed, as well as the trends of their change during 2013-2022 were revealed, which made it possible to make income, cost and financial result forecasts for 2023-2025.

Summarizing the practice of conducting IT business in Ukraine, the following main forms of interaction between companies and specialists in the market were identified: "company (employer) – specialist (employee)" and "company (customer) – specialist (independent individual entrepreneur contractor)". The different status of specialists determines differences in the taxation of their incomes and the existence of additional tax risks. Switching to the Diia City regime provides an opportunity to minimize tax risks and receive significant tax benefits.

Using methods of scientific abstraction and modelling based on industry average values of revenues, costs and financial results, appropriate parameters for a typical Ukrainian IT company were determined. This made it possible to calculate the change in the amounts of personal income tax, single tax, single social contribution, corporate income tax, as well as the tax burden in general when a typical IT company of Ukraine switches from the general tax system with employees to Diia City. In addition, the impact of the transition to Diia City on the gross and net margin of a typical Ukrainian IT company in 2023-2025 was reflected.

Along with this, residence at Diia City does not ensure the liberalization of currency transactions, effective protection of business from force pressure, as well as other conditions created for IT companies registered in EU countries.

Keywords: business, financial model, management, information technology, planning, taxation.

JEL: L86, C52.

Introduction

The global information technology (IT) market is developing dynamically and according to experts' estimates, it will reach a volume of about 12 trillion US dollars in 2027, showing an average annual growth of 7.9% (The Business Research Company, 2023). At the same time, this growth scenario takes into account the impact of the military conflict between Ukraine and Russia, which has been ongoing since the spring of 2022.

For Ukraine, the IT market is one of the promising sectors of the economy, along with the agricultural sector, the military-industrial complex, and energy. According to official statistical data, with the beginning of the military conflict, the share of added value of the IT sector in the GDP of Ukraine has more than doubled, but remains at the level of 2-3%, which is many times smaller than the share of the IT sector in the GDP of the leading countries of the world.

In order to regulate IT business activities and increase its role in the economy, a special tax and legal regime, Diia City, was launched at the beginning of 2022 (Diia.City, 2023). However, the full-scale war in Ukraine did not give an opportunity to fully use the potential of this tool.

According to the results of 2022, the IT business replenished the budget by UAH 32.2 million of taxes, of which only 4.1 billion goes to 451 residents of Diia City (Melnik, 2023). At the same time, among the largest taxpayers in this tax regime are product companies (streaming Megogo, Netcracker, game developer Plarium and neobank Monobank), and not typical for Ukrainian realities outsourcing companies such as EPAM, SoftServe and GlobalLogic.

Literature review

Issues of IT business activity in Ukraine are of considerable scientific interest. Among recent studies, we can highlight the study of the financial potential of the IT industry of Ukraine (Vyhovska, 2022b), the essence of business in the field of information technology as an object of financial management (Vyhovska, 2023), the determinants of the profitability of IT companies in Ukraine (Polchanov, 2023), financial planning in the IT sector (Vyhovska, 2022a), structuring IT business (Lagovska, et al., 2020) and other developments.

The results of the analysis of literary sources on the taxation of IT business in Ukraine indicate that scientists have, in particular, evaluated the global experience of taxation in the IT industry (Khomenko, et al., 2022), analysed the current domestic legislation regarding the taxation of residents of Diia City, and determined the directions for its improvement taking into account international experience (Nazarova & Kononenko, 2023). They also revealed the establishment of preferential taxation of the IT industry in Ukraine (Hetmantsev & Koval, 2022) and the peculiarities of the legal regime of Diia City. The audit of enterprises that have switched to this special tax regime (Mysiuk, et al., 2022), the influence of Diia City on attracting investments was investigated (Tyshchenko, 2022).

Unsolved aspects of the problem

At the same time, quantitative modelling of Diia City's impact on a typical IT business model remains insufficiently researched.

Purpose

The purpose of the article is to quantify the transition of a typical IT company to Diia City.

Materials and Methods

The information base of the study was scientific works on IT business in Ukraine, its taxation, as well as official statistical information of the State Statistics Service for 2013-2022.

Both general scientific and special methods became the methodological basis of the research. In particular, economic and statistical methods were used (to identify trends in the main financial indicators), modeling and scientific abstraction (to determine the parameters of a typical IT company in Ukraine), analogies and comparisons (to compare different tax regimes).

Results

The main types of mandatory payments paid by the IT business in Ukraine are:

1) value-added tax (basic rate 20%). Considering that the IT business is mainly export-oriented, therefore most of their operations are not subject to this tax;

2) corporate income tax (basic rate of 18%), which must be paid by enterprises subject to the general taxation system;

3) a single tax paid by representatives of small businesses (the amount of income does not exceed 1,167 amounts of the minimum wage established by law on January 1 of the reporting year, which makes calculations exclusively in cash). Being in the 3rd group of single taxpayers, such enterprises pay only 5% of income or 3% of income and additionally value-added tax;

4) a single social contribution (basic rate of 22%), mainly for wages calculated to each insured person.

In addition, IT companies act as tax agents for payers of personal income tax and military service.

Based on the fact that a typical IT business works according to the model of outsourcing or outstaffing for foreign clients, the main part of business expenses is paid for the work of specialists engaged for the end customer. According to analysts' estimates, such costs make up 80-85% of total costs (Cherkashin, 2022). In view of the issue of optimizing the tax burden, the vast majority are focused on payments to specialists that the business engages to provide services to its clients.

Before the introduction of Diia City to the IT market, there were two main forms of interaction between companies and specialists:

1) Relations in the "company (employer) – specialist (employee)" system. From the point of view of taxation, payments in such a system provide for payment from calculated wages to each employee:

- single social contribution at the rate of 22%;
- personal income tax at the rate of 18%;
- military levy at the rate of 1.5%.

2) The relationship "company (customer) – specialist (independent individual entrepreneur contractor)". From the point of view of taxation, payments in such a system involve the payment of:

– a single social contribution at the rate of 22% of the minimum wage for each individual entrepreneur;

- single tax at the rate of 5% of the calculated amount in favor of contractors;

Despite the significant tax advantage of the second option, it exposes the business to significant tax risks, including the recognition of labor relations, as well as the difficulty in attracting investment and entering new markets, as investors evaluate the team, and in the case of subcontracting agreements, it complicates negotiations with foreign partners.

Diia City is a special legal and tax space for IT companies in Ukraine, and generally provides:

1) reduction of the tax burden on labor income for IT specialists (personal income tax has been reduced from the standard rate of 18% to 5%), as well as reduction of the base for calculating the single social contribution to the amount of the minimum wage;

2) the possibility to pay either the traditional corporate income tax, which operates in Ukraine at the rate of 18%, or choose the recently introduced tax on withdrawn capital, non-typical for the domestic economy, at a reduced rate of 9%. At the same time, enterprises paying income tax in the amount of 18%, whose annual income does not exceed UAH 40 million (about 1.1 million of US dollars), will be able

to cooperate with the individual entrepreneurs without restrictions during the entire period of operation of the special regime. For all other residents, payments to the individual entrepreneurs should not exceed 20% of total expenses.

For those companies that will pay tax on withdrawn capital, amounts above the limit will be taxed at the rate of 9%. Income taxpayers will have to include in the financial result the costs of the individual entrepreneurs, which will exceed the allowed 20%.

3) the possibility of attracting specialists through GIG contracts – a separate civil law agreement that combines aspects of both labor contracts and subcontracting contracts. However, there are certain restrictions on cooperation with individual entrepreneurs depending on their annual income and the chosen type of taxation (Diia.City, 2023).

A resident of Diia City can be an operating enterprise registered on the territory of Ukraine, regardless of its location and place of business activity, which meets the following requirements (Fig. 1).

In addition, the Diia City resident is obliged to submit a report on compliance with the requirements for such residency for the period from January 1 to November 31 of the previous calendar year to the Ministry of Digital Transformation of Ukraine every year no later than June 1 of the year following the reporting year (annual compliance report).

It should be noted that the annual report of the Diia City resident must be checked by the subject of audit activity and issued with an audit conclusion, which is also submitted to the authorized body.

The compliance report must include ((Diia.City, 2023):

1) assurance of the Diia City resident's compliance with all requirements defined by the Law of Ukraine "On Stimulating the Development of the Digital Economy in Ukraine";

2) calculation of the average monthly remuneration for employees and gig specialists (if engaged) for each calendar month of the reporting period;

3) information on the average number of employees and gig specialists (if involved) of the Diia City resident based on the results of each calendar month of the reporting period;

4) data on the size of the share of qualified income of the Diia City resident, received during the reporting period, in the total income of the Diia City resident.

To model the performance indicators of a typical IT company, we used averaged data on the volume of products sold and the net profit of enterprises which main activity is computer programming (Table 1).

According to the given data, the total volume of sold products in US dollars (taking into account the average official exchange rate of the National Bank of Ukraine in the relevant period) grew by an average of 16% every year during 2013-2022, net profit – by 26 %, and the number of enterprises on the market – by 3%. At the same time, the volume of sales of an average statistical enterprise grew by 12% every year and net profit – by almost 22%.

The data for 2022 were used as the basis for modeling the transition of a typical IT company from the general taxation system with hired employees (basic option) to Diia City, as well as for comparing this tax regime with the option of involving the enterprise in the general system of taxation of individual entrepreneur contractors (table. 2).



Fig. 1. Basic requirements for residency at Diia City

Source: summarized by the authors based on (Verkhovna Rada of Ukraine, 2021).

Table 1

**Sales, Cost of production, Net profit (loss) and number
of active enterprises with main activity in computer programming
in Ukraine, during 2013-2022**

Year	Sales, thousand US dollars	Cost of production, thousand US dollars	Net profit (loss), thousand US dollars	Number of active enterprises	Average sales per enterprise, thousand US dollars	Average cost of production per enterprise, thousand US dollars	Average net profit (loss) per enterprise, thousand US dollars
2013	1,018,212.15	709,514.14	43,268.70	2668	381.64	265.93	16,22
2014	1,134,277.08	751,011.24	- 6,515.14	2491	455.35	301.49	- 2.62
2015	983,545.81	727,714.86	- 19,724.71	2670	368.37	272.55	- 7.39
2016	1,175,363.39	692,216.21	92,399.67	2450	479.74	282.54	37.71
2017	1,383,016.77	867,363.78	98,873.08	2909	475.43	298.17	33.99
2018	1,740,010.77	1,285,171.34	122,134.73	3374	515.71	380.90	36,20
2019	2,228,898.54	1,626,461.93	137,036.47	4031	552.94	403.49	34.00
2020	2,509,087.05	1,714,715.86	194,894.78	4393	571.16	390.33	44,36
2021	3,638,608.05	2,102,962.30	227,473.00	4753	765.54	442.45	47.86
2022	3,833,609.22	2,668,669.03	346,506.08	3621	1,058.72	737.00	95.69
<i>CAGR</i>	<i>15.87%</i>	<i>15.86%</i>	<i>26.01%</i>	<i>3.45%</i>	<i>12.00%</i>	<i>11.99%</i>	<i>21.80%</i>
2023	4,442,037.67	3,091,866.11	436,620.24	3,745.99	1,185.81	825.38	116.56
2024	5,147,029.21	3,582,173.70	550 169.96	3,875.29	1,328.16	924.36	141.97
2025	5,963,909.29	4,150,234.19	693,250.00	4,009.06	1,487.61	1,035.21	172.92

Source: authors' calculations based on data from the State Statistics Service of Ukraine

At the same time, the definition of the parameters of a typical IT company was based on the following assumptions:

1) the volume of sales for 2022 is equal to the volume of sales of an average enterprise providing computer programming services (\$ 1,058.72 thousand);

2) the cost of IT services for 2022 is equal to the production costs of an average enterprise providing computer programming services (\$ 737,000), and consists entirely of the costs of labor and/or services of IT specialists and related mandatory payments to the budget (personal income tax, military levy, single tax and single social contribution).

3) pre-tax profit for 2022 is defined as the net profit of an average enterprise providing computer programming services, increased by the amount of corporate income tax at the rate of 18%. Accordingly, other expenses are defined as the difference between the volume of sales and the sum of cost and profit before taxation. This category of expenses reflects administrative, general management and marketing expenses, etc.

4) the number of employees/contractors was 25 people. This assumption is based on data on the distribution of IT companies by the number of employees, according to which 62.3% of companies have a team of up to 50 people (IT Ukraine, 2022).

Table 2

**The result of modeling the transition of a typical IT company
to Diia City in 2022**

Index, thousands of US dollars	Basic option	An alternative option	Diia City	The difference between Diia City and the basic option
The volume of implementation of IT services	1,058.72	1,058.72	1,058.72	0.00
Number of employees/contractors, persons	25.00	25.00	25.00	0.00
Average earnings of an employee/contractor after taxes per month	1.62	1.62	1.62	0.00
Average salary fund (remuneration of IT specialists) after tax	486.30	486.30	486.30	0.00
All taxes and fees, including:	250.70	37.99	47,48	-203.22
- <i>Income tax</i>	108.74	0.00	26.01	-82.73
- <i>military levy</i>	9.06	0.00	7.80	-1.26
- <i>single tax</i>	0.00	24,31	0.00	0.00
- <i>single social contribution</i>	132.90	13.67	13.67	-119.23
Total cost of IT services	737.00	524.29	533.78	-203.22
Other expenses	205.02	205.02	205.02	0.00
Profit before taxation	116.70	329.41	319.92	+203.22
Income tax	21.01	59.29	57,59	+36.58
Net profit	95.69	270.12	262.33	+166.64
Tax burden, %	25.66%	9.19%	9.92%	-15.74 p.p.

Notes. The basic option is a general system of taxation with hired employees. An alternative option is a general system of taxation with individual entrepreneur contractors

Source: authors' calculations

The results of the conducted modeling show that the tax burden (the ratio of taxes and mandatory payments to revenue) when switching from the general system will decrease from 25.66% to 9.92%, which is actually at the level of the tax burden when using individual entrepreneur contractors instead of hired employees.

Based on the assumption of stability in the medium-term period, i.e. in 2023-2025, the CAGR (average annual growth rate) of sales volumes, production costs and net profit, a forecast of the key financial indicators of a typical IT company was made in the base scenario, which does not involve the transition of the company to Diia City (Forecast1), and in the case of the company's transition to Diia City (Forecast2). This, in its turn, made it possible to calculate the key profitability indicators of a typical IT company in Ukraine (Fig. 2):

1) GPM (gross profit margin) – the ratio of gross profit (difference between sales volume and production costs) to sales volume;

2) NPM (net profit margin) – the ratio of net profit to sales volume.

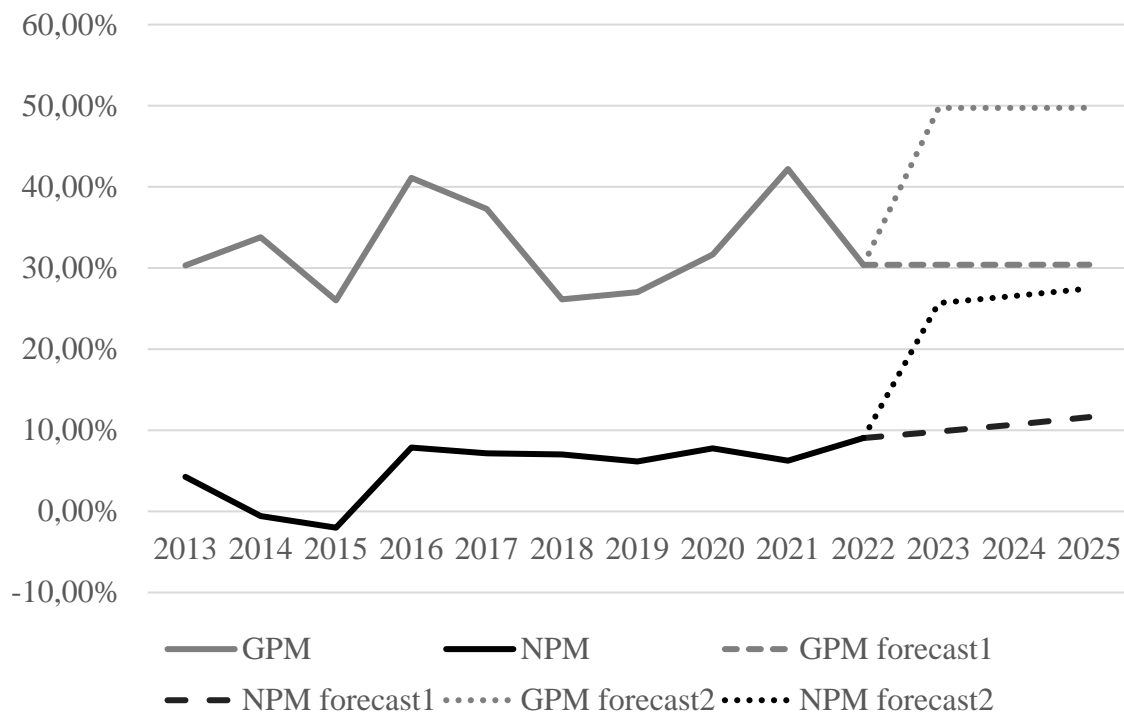


Fig. 2. Profitability indicators of a typical IT company in Ukraine

Source: authors' calculations

According to the given data, GPM was at the level of 30% throughout the analyzed period, and NPM increased from 4.25% in 2013 to 9.04% in 2022. At the same time, during 2023-2025, according to the base scenario, we can expect that the GPM will remain at the level of 30%, the NPM will continue to grow and will reach 11.62% by the end of 2025. In case of transition to Diia City, you can expect GPM to increase to 49.74% and NPM to 27.47%.

Comparing business organization alternatives in Ukraine, Diia City is the best option for business structuring from an economic point of view, which allows you to minimize tax risks and optimize the tax burden. At the same time, comparing the proposed model with the possibility of opening a business abroad in EU countries, this regime has a number of disadvantages:

1) the existence of restrictions on cooperation with individual entrepreneur contractors, which in some cases does not make it possible to quickly attract human capital to fulfill business tasks;

2) ineffective protection of business from the forceful pressure of law enforcement structures. An example of which is the case of the MacPaw company, which in February 2023 was accused of violating the land legislation (Maksimenko, 2023), and later the corresponding actions of law enforcement structures were recognized as insufficiently substantiated (Krytska, 2023);

3) strict currency regulation. In response to the introduced currency restrictions of the central bank under martial law, the difference between the commercial and official exchange rates of the NBU in relation to the US dollar (mainly the currency of export earnings) relative to the Ukrainian hryvnia can reach 5%, actually reducing the volume of IT services abroad by a twentieth.

4) lack of an effective mechanism for reserving IT specialists, which increases the risk of non-implementation of projects;

5) significant costs for the organization and implementation of financial work in conditions of instability of regulatory and legal regulation.

Conclusion

Diia City is a revolutionary attempt to stimulate the development of the information technology industry, which has shown resistance to military and political challenges and has significant potential for development in the near future.

The analysis of official statistical data made it possible to determine the volume of sales, production costs and net profit of a typical IT company of Ukraine, as well as to identify trends in the growth of the relevant indicators during 2013-2022 and to build a forecast for 2023-2025.

A detailed study of the features of Diia City made it possible to determine exactly how the application of this regime will affect the amount of tax payments of a typical IT company (personal income tax, single social contribution, corporate income tax) and its financial result. According to the results of the modeling of the IT companies' transition from the general taxation system with official employment of employees to Diia City, a significant positive impact of such a transition on business profitability indicators was revealed.

At the same time, compared to alternatives for business registration in the EU, Diia City has a number of disadvantages, typical for the regulation of any business in Ukraine (the existence of restrictions on cooperation with individual entrepreneurs, force pressure on business, currency restrictions, the complexity of accounting and reporting in conditions of constant legislative changes).

References:

- Cherkashin, V. (2022). Zberehty i zakhysty IT-uspikh Ukrainy [Preserve and Protect Ukraine's IT Success]. *Ekonomichna pravda*. [Economic Truth]. <https://www.epravda.com.ua/columns/2022/12/14/694961/> [in Ukrainian].
- Diia.City (2023). <https://city.diia.gov.ua>
- Hetmantsev, D. O., Koval, Yu. A. (2022). Stanovlennia preferentsiinoho opodatkuvannia IT-industrii v Ukraini [Formation of Preferential Taxation of the IT Industry in Ukraine]. *Yurydychnyi naukovi elektronnyi zhurnal* [Legal Scientific Electronic Journal], 8, 259-262. DOI: <https://doi.org/10.32782/2524-0374/2022-8/55> [in Ukrainian].
- IT Ukraine (2022). *Do IT Like Ukraine Research: Tech Industry is Growing Despite the War*. https://itukraine.org.ua/files/reports/2022/DoITLikeUkraine2022_EN.pdf
- Khomenko, I. O., Horobinska, I. V., Braha, O. V. (2022). Svitovyi dosvid opodatkuvannia v IT industrii ta STARTUP [Global Taxation Experience in the IT Industry and STARTUP]. *Yurydychnyi naukovi elektronnyi zhurnal* [Legal Scientific Electronic Journal]. DOI: <https://doi.org/10.32782/2524-0374/2022-8/55> [in Ukrainian].
- Krytska, I. (2023). MacPaw, «Multipleks», nelehalnyi tiutiun. Shcho Henprokuratura думає про скандаль з тиском силовиків на бізнес. Interv'iu zastupnyka Henprokurora [MacPaw, Multiplex, Illegal Tobacco. What the Prosecutor General's Office Thinks about the Scandals Involving Pressure on Business by Security Forces. An Interview with the Deputy Prosecutor General]. *Forbes*. <https://forbes.ua/money/macpaw-multipleks-nelegalniy-tyutyun-shcho-genprokuratura-dumaє-pro-skandali-z-tiskom-silovikiv-na-biznes-intervyu-zastupnika-genprokurora-14062023-14182> [in Ukrainian].
- Lagovska, O., et al. (2020). Method of Structuring Business Model and Mathematical Model of DSS of IT Companies. *Financial and Credit Activity Problems of Theory and Practice*, 2(33), 306-313. DOI: <https://doi.org/10.18371/fcaptp.v2i33.206959>
- Maksimenko, M. (2023). MacPaw zvinuvachuiut u porushenni zemelnogo zakonodavstva. Naskilky gruntovni zvinuvachennia? Rozbyraut yurysty [MacPaw is Accused of Violating Land Laws. How Substantiated are the Accusations? Lawyers Analyze the Case]. *Forbes*. <https://forbes.ua/company/macpaw-zvinuvachuyut-u-porushenni-zemelnogo-zakonodavstva-naskilky-gruntovni-zvinuvachennia-rozbyrayut-yuristi-27022023-12006> [in Ukrainian].
- Melnik, T. (2023). Rezydenty «Diia.City» splatyly lyshe 12,7% vid usikh IT-podatkov v Ukraini. Yaki kompanii naibilshe viriat u novyi podatkovyi rezhym [Diia.City Residents Paid only 12.7% of all IT Taxes in Ukraine. Which Companies Believe in the New Tax Regime the Most]. *Forbes*. <https://forbes.ua/innovations/diia-siti-podatki-17022023-11812> [in Ukrainian].
- Mysiuk, V., Tatenko, M., Tatenko, N. (2022). Spetsialnyi podatkovyi rezhym «Diia Siti»: osoblyvosti provedennia innovatsiinoho audytu [Special Tax Regime "Diia City": Features of Innovative Audit]. *Efektivna ekonomika* [Efficient economy], 5. DOI: <https://doi.org/10.32702/2307-2105-2022.5.70> [in Ukrainian].

- Nazarova, G., Kononenko, L. (2023). Opodatkuvannya rezydentiv Diia Siti: vitchyzniani ta mizhnarodnyi dosvid [Taxation of Diia City Residents: Domestic and International Experience]. *Naukovi perspektivi* [Scientific perspectives], 8(38). DOI: [https://doi.org/10.52058/2708-7530-2023-8\(38\)-378-395](https://doi.org/10.52058/2708-7530-2023-8(38)-378-395) [in Ukrainian].
- Polchanov, A. Y., et al. (2023). Profitability Determinants of Companies in IT Industry: Case of Ukraine. *Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu*, 2, 190-196. DOI: <https://doi.org/10.33271/nvngu/2023-2/190>
- The Business Research Company (2023). *Information Technology Global Market Report 2023*. <https://www.thebusinessresearchcompany.com/report/information-technology-global-market-report>
- Tyshchenko, Y. (2022). Pravovy rehym «Diia City» yak faktor zaluchennia investytsii [Legal Regime of «Diia City» as a Factor for Attracting Investments]. *Foreign Trade: Economics, Finance, Law*, 120(1), 19-37. DOI: [https://doi.org/10.31617/zt.knute.2022\(120\)03](https://doi.org/10.31617/zt.knute.2022(120)03) [in Ukrainian].
- Verkhovna Rada of Ukraine (2021, July 15). *Zakon Ukrainy pro stymuliuvannia rozvytku tsyfrovoy ekonomiky v Ukraini № 1667-IX* [Law of Ukraine on Stimulating the Development of the Digital Economy in Ukraine № 1667-IX]. <https://zakon.rada.gov.ua/laws/show/1667-20> [in Ukrainian].
- Vygovska, N. G., et al. (2022a). Finansove planuvannia diialnosti pidpriemstv sfery IT [Financial Planning of Activity of IT Companies]. *Efektivna ekonomika* [Efficient Economy], 12. DOI: <https://doi.org/10.32702/2307-2105.2022.12.7> [in Ukrainian].
- Vyhovska, N. G., et al. Y. (2022b). Otsinka finansovoho potentsialu pidpriemstv IT-haluzi v Ukraini [Assessment of the Financial Potential of IT Companies in Ukraine]. *Ekonomika, upravlinnia ta administruvannia* [Economics, Management and Administration], 3(101), 81-86. DOI: [https://doi.org/10.26642/ema-2022-3\(101\)-81-86](https://doi.org/10.26642/ema-2022-3(101)-81-86) [in Ukrainian].
- Vyhovska, N. G., et al. (2023). IT-biznes yak ob'ekt finansovoho upravlinnia [IT Business as an Object of Financial Management]. *Ekonomika, upravlinnia ta administruvannia*. [Economics, Management and Administration], 3(105), 159-165. DOI: [https://doi.org/10.26642/ema-2023-3\(105\)-159-165](https://doi.org/10.26642/ema-2023-3(105)-159-165) [in Ukrainian].