

## THE UKRAINIAN ECONOMY OFFSHORING: ESTIMATION OF FACTORS' IMPACT AND DEVELOPING MEASURES TO COMBAT

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**Abstract.** The study is devoted to the Ukrainian capital outflow analysis, finding main reasons, consequences and working out the recommendations. The purpose of the study was to research the reasons of offshoring, except tax avoidance, to estimate their impact on the state economy and develop the ways of economy de-offshoring based on the main results of the study. The main reasons, positive, negative effects and threats of economy offshoring were identified. The main reasons for offshoring other than tax avoidance were highlighted. Based on empirical, theoretical, and static research, it was found that a corporate raiding, an imperfect legal environment regarding the protection of property, intellectual property and high level of political risks have a significant impact on the economy offshoring. The influence of various factors ( $x_1, x_2, \dots, x_n$ ) on capital outflow was estimated on a base of correlation analysis. According to the received results the main ways of Ukraine's economy de-offshoring within the formation of institutional and legal support of de-offshoring were developed. Scientific methods such as general and special methods of cognition, methods of economic and statistical analysis, deduction, and the method of theoretical generalization were used in the study.

**Keywords:** offshore haven, capital, investments, de-offshoring, international financial markets.

**JEL Classification:** E22, F21, H26, H30.

### Introduction

Problem statement. A large number of modern companies use jurisdictions with law-taxes or non-taxes policy in their practice. We know these areas as a tax haven or an offshore. Despite the rapid development of offshore business in the years 1960–1970, the availability of areas with preferential tax treatment dates back to the beginning of our era. Many Greek islands around Athens set lower rates of import and export duties than Athens, so most cargoes were unloaded at their ports and then smuggled to Athens, where tariffs were too high. Thus, the desire to optimize tax and customs payments is inherent in entrepreneurs for a long time. Consequently, preferential tax regimes were introduced in Flanders, which almost ruined the British wool merchants, as well as in some US states in the sixteenth – eighteenth centuries. Many offshore

prototypes were created in the form of “Porto-Franco” – tax free ports. Finally, in some areas of the British Empire, especially in the Caribbean, introduced preferential tax regimes, respectively, this list has expanded significantly and now stands at about 100 territories with preferential tax treatment.

The current volume of capital movements offshore is impressive. In particular, about 10% of all world capital is concentrated offshore, more than 50% of world trade goes offshore (Lutsyshyn et al., 2019), it is estimated that the total amount of assets placed offshore is from 21 to 32 trillion dollars. USA (Lutsenko, 2015), about a third of the capital in the form of deposits, amounting to about 11.5 trillion dollars. The United States is an offshore jurisdiction according to the Organization for Economic Cooperation and Development (OECD) (Redzyuk, 2015).

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It is estimated that 89% of leading US corporations and 99% of leading EU corporations place their offices offshore. As for the post-Soviet countries and Ukraine, most of the capital is returned to the country as round-trip investments, but the amount of capital accumulated offshore is also significant. Businesses in Russia, Kazakhstan, and Ukraine hold about 40% of their capital offshore. Ukrainian business is most active in using Cyprus to reduce the tax burden and withdraw capital. According to experts, the amount of capital placed in Cyprus reaches about 30 billion \$ (Kostyuk, 2016), and for the period since the beginning of the Russian aggression on Cyprus, assets worth more than 500 billion € were withdrawn (Redzyuk, 2015; Vyhovska, 2015).

Such relocation is usually carried out through transfer pricing, which allows the distribution of funds between structural units. However, in practice, such actions are only a legal way to move capital offshore to reduce taxation (Sikka & Willmott, 2010).

In general, many scientific papers are devoted to the study of capital outflow, tax avoidance, and economy offshoring and highlight the causes of these phenomena, their scope and trends (Gupta & Makena, 2020; Goel et al., 2018; Brizi et al., 2015). Research of scientists (Varnalii, 2018; Kostyuk, 2016; Lebid & Harkusha, 2019) is also devoted to the study of Ukraine economy offshoring and capital outflow. Another interesting research (Podra et al., 2020) is devoted to the study of the impact of migration on the capital outflow through the volume of remittances, as well as the study of the impact of technology development, outsourcing and offshoring on the volumes of non-migratory forms of mobility, in particular pendulum mobility, tourism, business trips. Furthermore, this issue is relevant today, because impressive volumes of capital outflow are located in the offshore residences (The Boston Consulting Group [BCG], 2020). The urgency of the problem is supported by data on the annual movement of offshore haven on average 9.8% of the world's wealth, with the maximum values of this indicator being 65–70% (Alstadsætera et al., 2018).

All in all, offshoring and capital outflow harm the economy: reducing GDP, reducing tax revenues, increasing tax asymmetry and promoting non-market competition. Besides, measures for Ukraine's economy de-offshoring don't produce positive results. Nonetheless, these measures are regular and involve various, even strict steps. That's why it is necessary to indicate factors for economy de-offshoring except for tax policy and estimate the nexus between them and the offshoring level. Based on this, develop measures for economy de-offshoring. Based on this, develop recommendations for economy de-offshoring. Therefore, the analysis of capital outflow is relevant, especially the demonstration of the capital outflow causes.

The study findings should be applied while establishing functions of the emerging Bureau of Economic Security Ukraine. Furthermore, the method of determining the nexus between different factors and the economy offshoring level should be implemented in the practice of

the Bureau's activity for estimating the level of the state's economic security. It will contribute to economy de-offshoring and ensuring the state's economic security.

The purpose of the study is to research the reasons of offshoring, except tax avoidance, to estimate their impact on the state economy and develop the ways of economy de-offshoring based on the main results of the study. To achieve this goal of the study, the main objectives of the study were identified analyzing offshoring; establishing the positive and negative consequences of offshoring for the economy; identifying the main factors that influence offshoring except tax policy; developing ways to minimize the negative impact of offshoring on the state's economy. The research methods include empirical, statistical, comparative, and correlation analysis.

## 1. Literature review

A characteristic feature of the modern economy is the transformation of financial and economic relations, which are associated not only with the globalization and digitalization of the economy but also with the emergence of so-called offshore or offshore jurisdictions. Since the middle of the last century, there has been a gradual movement of capital and financial and economic operations offshore, which led to the process of offshoring the economy. Representatives of the world economic community seek to reduce the tax burden, which leads to the transfer of a significant share of capital to offshore jurisdictions, where the tax burden is much less or nonexistent. Scientists studied the economic content and essence of offshoring, the scale and consequences of capital outflow from the Ukrainian economy offshore, studied the main schemes of capital outflow and money laundering, considered the state and main problems of offshoring of Ukraine's economy (Lutsyshyn et al., 2019). Also was studied the role and scale of offshoring and its impact on the economy of Ukraine, developed a number of measures to stimulate the return to Ukraine of previously exported capital (Redzyuk, 2015). Some scientists studied offshoring as a separate economic category analyzed the effectiveness of the method of calculating the coefficient the economy offshoring of and its impact on the economic security of the state (Chernomaz & Subachieva, 2016).

As a result of offshoring, the number of tax payments in the general structure of the country's GDP, and so the budget revenues, decreases, and there is a significant increase in the amount of capital exported from countries to offshore. Moreover the growth of the level of offshoring of the economy leads to an increase in tax asymmetry, capital outflows and creates a number of threats to the economic security of both individual states and the global economy. Offshoring has become a real phenomenon of the modern global economy. The main reasons for the capital and financial transactions outflow outside national jurisdictions are the excessive tax burden compared to offshore jurisdictions. Consequently was studied the nature and main causes of tax evasion and avoidance, developed an

alternative theoretical justification for the relationship between tax evasion and inflation (Gupta & Makena, 2020). For example researchers considered the impact of offshoring of the economy and the shadow economy on economic growth and development of the state in the long run and also developed the main directions legalization of the economy (Goel et al., 2018). Other researchers analyzed the influence of offshore jurisdictions on the world economy, studied the scale and consequences of capital outflows and predicted the main directions of development of the global economy (Hendrikse & Fernandez, 2019).

An important role in the process of the world economy offshoring was played by globalization, as well as the liberalization of economic policies, especially foreign economic policies of many countries, the formation of free and open markets, free movement of capital and investment, contributed to the intensification of offshoring national economies and global economy. Scientific and technological progress has also made a significant contribution to this process, in particular the development of information and communication systems and the digitalization of the economy by large. Instead, offshore jurisdictions are formed for various reasons, mainly states with low socio-economic development or depressed areas that require an influx of investment and capital. Thus, offshore as a process that is actively developing, has a significant impact on the economies of many countries and the world economy, on international financial and capital markets, respectively, and significantly affects the financial and economic security of all countries. Scientists studied the relationship between e-commerce and corporate social responsibility and, in particular, the impact of e-commerce for employee payroll taxation (Argilés-Bosch et al., 2020).

Varnalii (2018) considered offshoring from the standpoint of security science and its impact on the economy. The researcher identified offshoring as an institutional threat to the economic security of the state, exploring ways of the Ukraine economy de-offshoring as a priority area of state security (Varnalii, 2018). The active process of offshoring Ukraine's economy began in the early 1990s. Significant amounts of capital are exported outside the country, the volume of foreign economic activity with counterparties from offshore jurisdictions is constantly growing, and a significant amount of investment in Ukraine's economy comes offshore. Accordingly, there is a significant impact on the Ukrainian economy offshoring, in particular on the economic security of the state. All this determines the relevance of the chosen research topic, as there is a need to disclose the theoretical content of offshore, clarify the nature of its impact on the state economy and find ways to minimize the negative impact on the economy to ensure economic security.

Researchers investigated the outflow of foreign direct investment from emerging economies to developed economies that face specific institutional failures and provide certain tax advantages (Kottaridi et al., 2019). Also was studied the relationship and impact of illegal and criminal transactions on the inflow or outflow of foreign direct

investment (Cabral et al., 2018). Evenly important is the study of the causes of offshoring and backshoring at different levels (Di Mauro et al., 2018). Researchers studied the offshoring of the economy, including the offshore of the banking sector and the impact of offshoring on financial stability and security (Feve et al., 2019).

An important reason for offshoring is imperfect legislation and government corruption. Apostol and Pop studied the impact of corruption and bureaucracy in post-communist countries on the spread of neoliberalism, analyzed the impact of ethical motives and tax consulting on the mentality of taxpayers and the amount of taxes paid (Apostol & Pop, 2019). Moreover was studied the practice of using transfer pricing and its impact on tax payments, capital outflows and financial stratification of the population (Sikka & Willmott, 2010).

It was found the main jurisdictions within Europe, Asia, America and Africa, which are considered offshore, revealed the specifics and features of offshore, and described the features of the territories and jurisdictions that are offshore under Ukrainian law (Karlin & Borysiuk, 2016). Also was analyzed the positive and negative consequences of offshore activities using SWOT-analysis, considered the consequences of non-interference of the state in the activities of economic entities using offshore, assessed the impact of offshore operations on Ukraine's economy and substantiated the main threats caused by the active use of offshore jurisdictions by Ukrainian business (Lebid & Harkusha, 2019). Lutsenko studied methodological approaches to assessing the level of tax security of the state and proposed indicators for assessing the level of tax security, as well as their limit values (Lutsenko, 2015).

Literature review declares that offshoring harms economy and the capacity of capital outflows and the level of offshoring are influenced by a wide range of factors, in addition to the state's tax policy. Therefore, despite a large number of studies, it is advisable to consider a broader list of causes of offshoring and determine the degree of their relationship and impact on the level of the Ukrainian economy offshoring. Based on the study results, more effective measures should be applied for economy de-offshoring.

## 2. Research methodology

Firstly, the study is devoted to determining the reasons for capital outflow and Ukraine's economy offshoring. In particular, this paper aims to establish a wider range of reasons for Ukraine's economy offshoring and capital outflow, in addition to the main reasons – tax avoidance and the search for tax benefits.

The calculation of the economy offshoring rate used the method represented by the formula:

$$K = \frac{COF}{GDP}, \quad (1)$$

where *COF* – Capital outflow; *GDP* – Gross domestic product.

It is crucial to determine the covert capital outflow, which shows the amount of capital outflow withdrawn from the state covertly, to calculate the total capital outflow. In particular, it is unearned revenue from export contracts, payment for imports of goods and services not received payments for fictitious securities transactions. Accordingly, we calculate the total capital outflow by using the formula:

$$COF = \sum_{i=1}^n D + \sum_{i=1}^m FDI + \sum_{i=1}^l PI + \sum_{i=1}^k CCF - \sum_{i=1}^j RT, \quad (2)$$

where *COF* – Total capital outflow; *D* – Deposits (outward); *FDI* – Foreign direct investments (outward); *PI* – Portfolio investments (outward); *CCF* – Covert capital outflow (outward); *RT* – Round-trip investments.

Secondly, the study used correlation analysis to determine the relationship of various factors ( $x_1, x_2, \dots, x_n$ ) on the dependent variable ( $y$ ) that is the level of capital outflow. To identify the factors that have a severe correlation and may have a severe impact on Ukraine's economy offshoring.

Thirdly, the study, based on the dependence of the state economy on investment and capital in offshore, based on data (Tax Justice Network, 2021) is also aimed at analyzing the relationship between capital outflow and direct foreign investment (FDI). The study includes empirical studies of the persistent dependence of offshoring on the presence of political risks in developing countries (Lensink et al., 2000). Data from the study of the impact of moral and ethical norms of the entrepreneur, the level of social responsibility and trust in the government on taxes and offshoring (Brizi et al., 2015) are taken into account. These data will establish and test assumptions about the significant impact on the Ukraine's economy offshoring factors not related to the tax policy of the state.

The final stage is the development of ways to the state's economy de-offshoring based on the research results. Also, the results of the study may have an impact on the formation of legislative and institutional support for economic security of the state, in particular in the formation of the main directions of Bureau of National Economic Security, which is planned to be established.

The information base of the study consisted of scientific articles and other publications of Ukrainian and foreign scientists, data from Tax Justice Network, World Bank Group, National Bank of Ukraine, State Statistics Service of Ukraine, and other statistical organizations.

### 3. Results and discussions

There are many reasons for offshoring, but from a security point of view, the result is the same – the movement of financial transactions, which reduces the tax base in national jurisdictions and reduces tax liabilities, which threatens the economic security of the state. Instead, the reverse process is de-offshoring. Accordingly, the concept of “de-offshoring” will be interpreted as the process of moving capital and financial transactions from offshore

to national jurisdictions. A significant amount of research is devoted to establishing the causes of offshoring, but the analysis of these causes in this study is due to the need to identify those reasons that are not related to tax policy, to study their impact on offshoring Ukraine's economy.

The reasons for offshoring and capital outflow should be considered through the analysis of the benefits and threats of this process for business and the state economy. The advantages of offshoring include low tax burden and simplified reporting system; simplified access to international financial markets; protection of property and other rights, international legal protection against corruption and raiding, judicial protection in accordance with the provisions of international law; confidentiality of information regarding business owners and the volume of financial and economic activities, as well as the protection of such information. The advantages of offshoring for the state economy are the availability of flexible and effective mechanisms for reinvesting funds in the national economy through access to the global financial system, as well as the ability to avoid legal conflicts and protect business structures in accordance with international law.

Despite the significant number of advantages, offshoring poses certain threats to business, among them the following: increased attention of fiscal and law enforcement agencies to enterprises registered offshore; state restrictions on the acquisition of assets by non-residents, the need to obtain licenses for activities, etc.; state barriers to activities in the field of national security and the military-industrial complex; deterioration of business reputation due to the use of offshore, the need to prove that the capital owned by the company was not acquired by criminal means. Offshoring contributes to the formation of a number of threats not only to business but also to the state economy, in particular: reduction of tax revenues and budget revenues; outflow of capital abroad; withdrawal of illegally obtained funds and their legalization; shadowing of the economy.

Based on the data of the Tax Justice Network, it is possible to analyze the level of dependence of the domestic economy on capital located in offshore harbors. In particular, we analyzed the Vulnerability to FDI (inward) and to Portfolio investment (inward) flows in 2013–2018 and found that among the 10 largest investors in the domestic economy, the sum of the vulnerability of partner countries belonging to offshore is on average – 57–60% for FDI and 26–42% for Portfolio investments (Figure 1).

The analysis data show a high level of dependence of Ukraine's economy on partner countries that are offshore harbors and on the capital located there. Accordingly, the state's economy is heavily dependent on capital and investment coming from offshore. The results of these studies must be taken into account in the development of security measures for the economy de-offshoring.

Further, it's important to analyze another reason for the popularity and spread of offshore – favorable conditions for investment and business development. Part of the capital withdrawn from the country is then returned

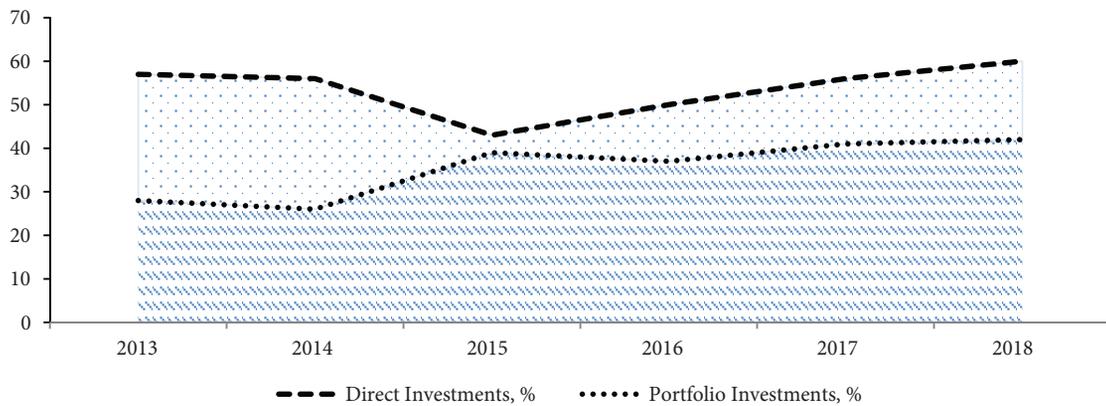


Figure 1. Vulnerability of Ukrainian portfolio investments (inward) and FDI (inward), in % (adapted from Tax Justice Network, 2018)

in the form of Foreign Direct Investments (FDI). Such investments are called round-trip investments, it is domestic investments that were previously transferred to offshore jurisdictions and later returned as foreign investments.

By and large, reinvestment is an important process for Ukraine’s economy, as in recent decades such schemes have become not only commonplace but also a major source of financing for the Ukrainian economy and economic development. Figure 2 shows the main countries-investors in the economy of Ukraine.

We can conclude that the main investors in the Ukrainian economy are companies located in Cyprus and the Netherlands – the two most famous and popular offshore companies in Europe. Respectively, the objects of investment are Kyiv, Kyiv, Donetsk, and Dnipropetrovs’k regions – administrative-territorial units, on the territory of which a significant share of Ukrainian industrial potential is concentrated. Thus, a significant part of the FDI flow is residents’ own funds that are reinvested in their own enterprises using offshore and round-trip investments, which must be taken into account when developing measures for economy de-offshoring.

Based on the analysis of the dynamics of foreign direct investment and the dynamics of round-trip investments (Figure 2), a high level of their dependence was revealed. Only in 2016, there was a relatively weak correlation, in all

other analyzed years, the relationship is quite significant. Accordingly, the dynamics and the volume of FDI show a strong correlation. Regarding the government’s policy to reduce round-trip investments, it should be noted that a significant impact on the reduction of round-trip investments can lead to a significant reduction in total foreign direct investment, which will significantly affect GDP and economic stability.

That is why when developing measures to reduce the volume of this type of investment should take into account its security value at this stage of development of Ukraine’s economy.

Offshoring has become a real phenomenon today. In the course of the research, the coefficient of the Ukraine economy and other countries’ economies offshoring was calculated.

The calculated values of the offshoring coefficient are presented in Table 1.

It could be concluded that offshoring is typical of most countries, and Ukraine’s economy offshoring coefficient is quite high. Therefore, the concept of offshoring should be considered more carefully. According to research, offshoring is a process of the negative impact of offshore activities on the national economy, which manifests itself in the unproductive of capital outflow to offshore jurisdictions in order to optimize investment conditions, minimize or

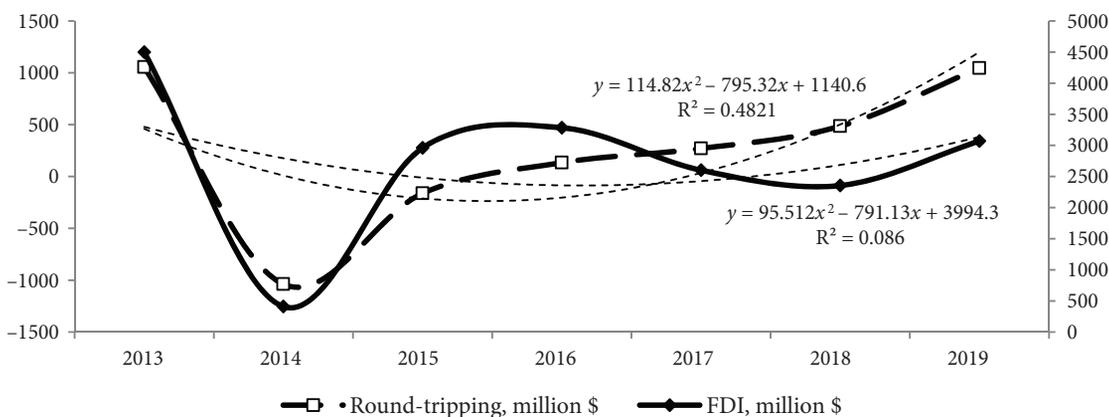


Figure 2. The nexus between Ukrainian FDI (inward) and Round-trip investments (in million \$) (adapted from National Bank of Ukraine, 2019)

Table 1. Data and results of Total capital outflow and Offshore ratio calculations (adapted from the State Statistics Service of Ukraine, 2021; Tax Justice Network, 2021)

Indicator, billion \$	2013	2014	2015	2016	2017	2018	2019
Deposits (outward)	11.793	6.099	15.748	8.040	6.246	10.731	10.170
FDI (outward)	3.001	2.108	2.208	5.223	5.780	4.830	5.329
Portfolio investments (outward)	0.172	0.216	0.188	0.121	0.126	0.161	0.172
Covert capital outflow	0	2.150	0.250	2.800	1.400	2.400	2.448
Round-trip investments	1.055	-1.038	-0.162	0.134	0.270	0.485	1.046
Total capital outflow	13.911	11.611	18.556	16.050	13.282	17.637	17.073
Gross Domestic Product	183.3	131.8	90.6	93.3	112.15	130.8	153.8
Offshore ratio	7.59	8.81	20.48	17.20	11.84	13.48	11.10

Table 2. Results of the correlation analysis

	$y$	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$	$x_6$	$x_7$
$y$	-	0.1285	-0.3033	-0.4224	0.57704	0.81254	-0.3771	0.36884
$x_1$	0.1285	-	-0.4152	-0.3019	0.73139	0.17404	-0.0926	0.10771
$x_2$	-0.3033	-0.4152	-	0.81365	-0.7246	-0.1849	0.53034	0.55183
$x_3$	-0.4224	-0.3019	0.81365	-	-0.4238	-0.6063	0.90677	0.24996
$x_4$	0.57704	0.73139	-0.7246	-0.4238	-	0.21599	-0.0921	-0.2746
$x_5$	0.81254	0.17404	-0.1849	-0.6063	0.21599	-	-0.711	0.38048
$x_6$	-0.3771	-0.0926	0.53034	0.90677	-0.0921	-0.711	-	-0.0537
$x_7$	0.36884	0.10771	0.55183	0.24996	-0.2746	0.38048	-0.0537	-

evade taxation and money laundering. The analysis results show that by and large, the situation with capital outflow is not positive; the offshore ratio of Ukraine's economy shows a negative trend. We conclude that government measures to combat capital outflow are not effective enough. The next stage of the study is to analyze the influence of different factors on the level of capital outflow.

To analyze the impact of various factors on capital outflow, a correlation analysis was performed. This analysis involved estimating the nexus between various factors ( $x_1, x_2, \dots, x_n$ ) and the dependent variable ( $y$ ). Among the factors likely to have an impact on capital outflow ( $y$ ) were the following: budget deficit ( $x_1$ ), GDP ( $x_2$ ), external debt ( $x_3$ ), inflation rate ( $x_4$ ), corporate raiding ( $x_5$ ), and level of peoples trust to banks system of Ukraine ( $x_6$ ), round-trip investments ( $x_7$ ). The results of the analysis are presented in Table 2.

To estimate the obtained value of the factors ( $x_1, x_2, \dots, x_n$ ) influence on the dependent variable ( $y$ ) was used a scale: 0.1–0.25 – insignificant or absent influence; 0.25–0.5 – there is a weak dependence; 0.5–0.8 – the level of dependence is above average; 0.8–0.99 – a strong level of dependence. Accordingly, the results are presented in Table 3.

As a result of the conducted analysis, a strong influence of factor  $x_5$  (0.81254) was established, which is identified as corporate raiding rate. Therefore we concluded that corporate raiding is one of the most important reasons influencing capital outflow except the tax policy of

Table 3. The results of the influence level of factors ( $x_1, x_2, \dots, x_n$ ) on the dependent variable ( $y$ )

Range of indicators	Level of influence	Factor
0.1–0.25	weak impact	$x_1$
0.25–0.5	below average impact	$x_2, x_3, x_6, x_7$
0.5–0.8	average impact	$x_4$
0.8–0.99	strong impact	$x_5$

the state. The dynamics and level of the relationship between corporate raiding in Ukraine and Ukraine's offshore ratio are graphically presented (Figure 3).

The level of the relationship between corporate raiding in Ukraine and Ukraine's capital outflow represented at the Figure 4. It can be concluded that corporate raiding has a significant impact on Ukraine's capital outflow also on the offshore ratio of the Ukrainian economy.

It can be concluded that corporate raiding has a significant impact on Ukraine's capital outflow and on the offshore ratio of the Ukrainian economy as well.

Furthermore it is important to take into account the results of empirical research on the relationship of political risk to capital outflow, which is carried out for a large set of developing countries (Lensink et al., 2000). Since in a very small number of cases out of 7,000 there is a relatively weak correlation, the analysis suggests that

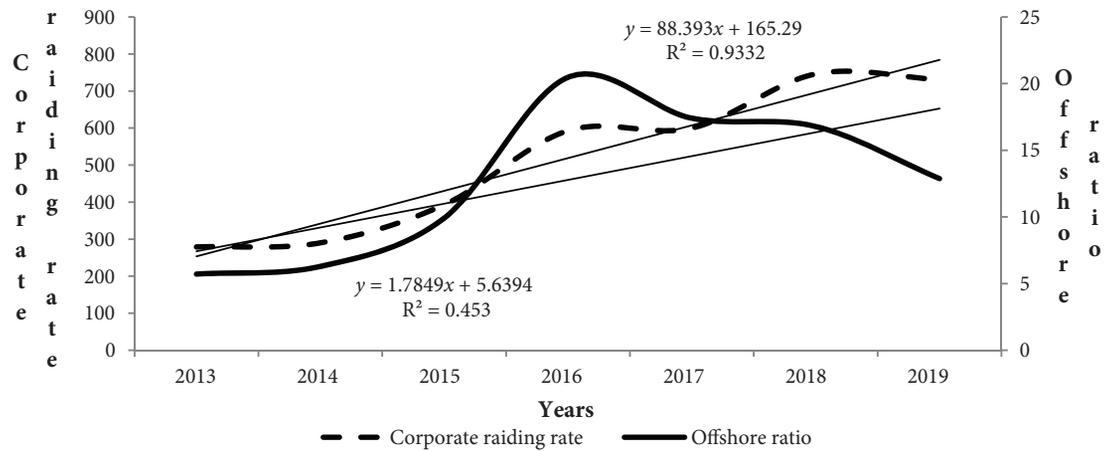


Figure 3. Nexus between corporate raiding in Ukraine and offshore ratio (adapted from National Bank of Ukraine, 2019)

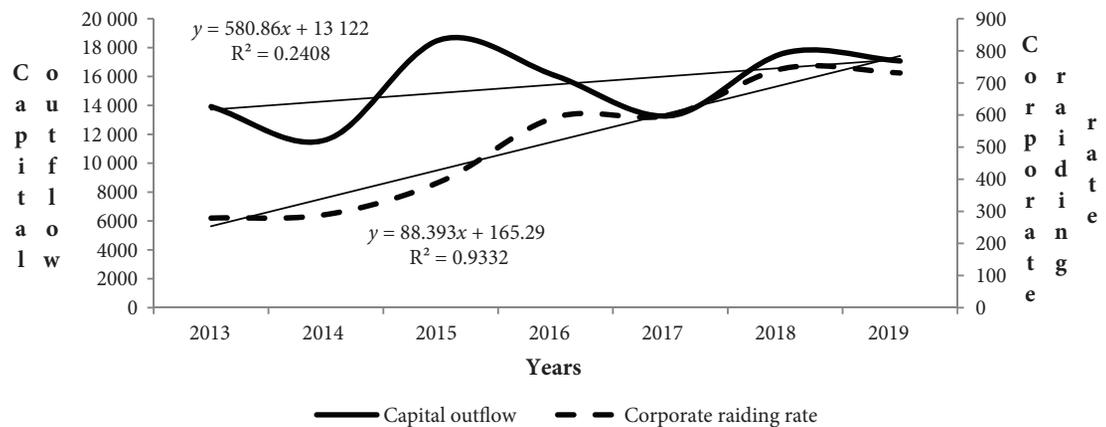


Figure 4. Nexus between corporate raiding in Ukraine and Ukraine’s capital outflow (adapted from National Bank of Ukraine, 2019)

there are stable relationship and the impact of political risk on capital outflow, especially for developing countries, in this case for Ukraine. These empirical calculations can be confirmed by the analysis of the number of open enterprises in offshore harbors for the period 1992–2016. Respectively, the largest number of companies offshore was registered during the crisis, especially the periods of institutional crises in 1999 and 2007. Thus, among the causes of economic offshoring payment of taxes and their size is important due to the presence of significant political risks in the state. Accordingly, the capital outflow and the economy offshoring are a consequence of the desire to protect property and intellectual rights, property rights that are violated and cannot be fully secured by public authorities. In Ukraine, in particular, there is a significant level of regulatory and political influence on business, a high level of corruption, a significant number of raids on business, especially in the period 2001–2015, and other examples of violations of rights and freedoms. Accordingly, one of the important reasons for the offshoring of the Ukrainian economy is the attempt to protect its business from such threats. That is why the government’s policy of de-offshoring and legalization of the economy has not

been so successful, as very few measures have been taken to counter the identified threats.

Given the historical aspects and current trends, offshoring should be considered not only as a process of tax evasion but also as a process of optimizing economic activity, which to some extent contributes to economic development. Also note that according to researchers (Brizi et al., 2015) the number of tax payments and the magnitude of tax asymmetry is influenced not only by tax rates, penalties for non-payment of taxes and tariffs for auditors, but also moral and ethical values, the level of social responsibility of the entrepreneur and the level of his trust in the government, more precisely the belief that tax revenues are used to improve people’s welfare. The high level of social responsibility and trust in the government contributes to the formation of the tax culture of entrepreneurs and, accordingly, the amount of tax revenues increases and the tax asymmetry decreases. Accordingly, a low level of trust in government and social responsibility contributes to the offshoring of the economy. The data of this study are especially relevant for the domestic economy. That is why most companies, including international ones, use offshore in their financial activities.

Summing up the results of the analysis, we note that the urgent problem today is the need to de-offshore the economy to legalize it and ensure the economic security of the state. Global Financial Integrity (2020) estimates that Ukraine's annual capital losses are about \$ 11 billion. Accordingly, no less important area of activity is the return of withdrawn capital to Ukraine, which will contribute to active economic development, reduce external debt and increase GDP. It should also be noted that in Ukraine the amount of withdrawn capital significantly exceeds the amount of external debt. In particular, this ratio (capital outflow/external debt) is 1.29. That is, the amount of withdrawn capital by 29% exceeds the amount of external public debt. Accordingly, the creation of favorable conditions for the economy de-offshoring and the return of capital will have a very significant impact on GDP growth and welfare.

#### 4. Managerial recommendations

The reasons for economy offshoring, except tax avoidance, are a significant number of political risks in Ukraine, a significant level of administrative influence on business, including corruption, and the desire of entrepreneurs to protect their property rights, including raiding. All these reasons contribute to the offshoring of the economy. It should be noted that offshoring has become a threat not only to the Ukrainian economy, but also to the economy of many countries and the global economy. That is why in 2013 the OECD developed a plan to erode the tax base and remove profits from taxation, the BEPS plan, the main task of which is to prevent the flow of capital to offshore jurisdictions. More than 100 countries have joined the plan, including Ukraine, which requires concrete measures to combat economic offshoring. Active work is also underway to establish the National Economic Security Bureau and to delegate to this unit all functions related to the economy de-offshoring. These circumstances confirm the relevance of the results of the study, as their consideration in the implementation of the BEPS plan and in the formation of the main directions of National Economic Security Bureau will increase the effectiveness of measures to de-offshore the economy. Therefore, it is necessary to solve the problems that motivate entrepreneurs to choose offshore jurisdictions, in addition to the desire to reduce the tax burden – protection of property, intellectual and other rights violated in Ukraine, protection of business from raiding, access to effective and reliable financial instruments in the international market.

To summarize, we suppose some measures should be introduced for Ukraine's economic de-offshoring. Firstly, the institutional support of de-offshoring and economic security should be improved by combating raiding, protecting property, intellectual and other rights and freedoms of citizens. The implementation of these measures seems possible by creating a department for combating raiding and protecting the economic rights of citizens in National Economic Security Bureau of the state, which is planned to be established. It is necessary to give a wide

range of powers to this unit to monitor, prevent and combat raiding and promote the protection of property and intellectual rights of citizens, legal entities, and foreign investors. Attention should also be paid to improving the legal support of these measures.

Secondly, to improve the market environment for doing business, to improve the investment climate – such measures should be systematic and should include increasing the transparency of the judiciary, developing financial infrastructure, restoring the authority of government and institutions, increasing investment attractiveness through economic and political stabilization. In particular, strict control over the size of the External Debt, the size of which in relation to GDP significantly exceeds the recommended limit (60% of GDP), which significantly reduces the investment attractiveness of the state and indicates the presence of a significant number of risks.

Thirdly, we conclude that at this stage most of the practical efforts should be aimed at improving the investment climate and the formation of effective mechanisms for asset recovery, and the introduction of capital amnesty, to optimize capital tax rates. Because it is established and justified the need to take into account the strong relationship between FDI and Round-trip investments and their impact on the economic security of the state in the process of forming measures of the economy de-offshoring.

#### Conclusions

The study analyzed economy offshoring as a phenomenon in-built in our time. The analysis reveals that the volume of foreign direct investment largely depends on the re-investment of capital previously withdrawn offshore – round-trip investment. Having analyzed the investment structure was found that a decrease in investment is directly correlated with a decrease in round-trip investments. The FDI sources of origin were analyzed and it was established that the majority comes from offshore.

The level of state economy dependence on operations with offshore countries was studied and the high level of state economy dependence on such partners was concluded. A stable link between FDI and round-trip investments has been identified, which allowed concluding that while developing measures to reduce the volume of round-trip investments it is necessary to take into account their safety value for the economy. An analysis of the dependence of vulnerability to FDI (inward) and Portfolio Investment (inward) flows in 2013–2018 showed a significant level of dependence of the economy on partner countries belonging to offshore countries.

The study used an improved method of the total capital outflow indicator calculating to estimate the offshoring level. This approach has made it possible to assess the level of capital outflows and economy offshoring more clearly. It has been founded that the level of economy offshoring is not critical, but rather threatening. Accordingly, the economy needs measures to reduce the level of capital outflow and economy de-offshoring.

The main potential factors contributing to the capital outflow, apart from tax policy and high tax burden, have been identified. A correlation analysis was performed and a mathematical model was formed that reflects the relationship and influence of various factors on the level of capital outflow and economy offshoring. The severe nexus between corporate raiding and the level of economy offshoring was revealed.

The study found that the level of offshoring, in addition to tax avoidance, is significantly affected by the level of political risks and the need for the legal protection of property and intellectual property rights of Ukrainian business and foreign investors, especially from raiding, avoiding excessive administrative pressure from tax services and avoiding political pressure on a business. It is the imperfection of the tax system and legislation, a significant level of criminalization and corruption of society and government that led to the rapid offshoring of the national economy in the late 1990s–early 2000s.

The analysis of the ratio of Capital outflow, GDP, and External Debt of different countries and Ukraine was also made. Offshore assets and capital were found to exceed External Debt by 29%. On the one hand, it is a real problem and threat to the economy, but on the other, it could be a real possibility to increase total FDI and to increase the efficiency of the economy. To achieve this is possible by introducing a well-thought-out capital amnesty policy.

The study findings should be applied while establishing functions of the emerging Bureau of Economic Security Ukraine. Furthermore, the method of determining the nexus between different factors and the economy offshoring level should be implemented in the practice of the Bureau's activity for estimating the level of the state's economic security. It will contribute to economy de-offshoring and ensuring the state's economic security.

Further research directions should be strived at establishing the optimal level of tax burden and ways to ensure the protection of property rights.

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## Author contributions

All authors contributed equally.

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