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Income Taxation in Global Digital Economy: Challenges and Reform Directions in Light of OECD Proposals

ABSTRACT

The article discusses the main challenges related to the taxation of income generated in the digital economy. Digital business models, based on user data and global operations, undermine the traditional rules of tax nexus, leading to base erosion and tax avoidance by multinational corporations. The author analyzes current legislative approaches, such as unilateral digital services taxes and OECD proposals, including the global minimum tax concept. The article emphasizes that an effective reform requires international cooperation and support for developing countries to ensure a fair and balanced tax system in the digital age.

KEYWORDS: digital economy; income taxation; tax gap; global minimum tax; OECD; profit shifting

INTRODUCTION

Is it possible to create a fair and effective taxation system in the era of digital revolution, the dynamics of which are changing both business models and the nature of financial flows on

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a global scale? In the era of technological progress and changes in economic structures, the importance of digital economy is constantly increasing, and its impact on tax systems is becoming more and more noticeable. Companies such as Google, Amazon and Facebook operate in many countries, often without a physical presence, which allows them to avoid taxation resulting from traditional regulations. Physical location-based tax systems are becoming inadequate in the face of these challenges, leading to tax loopholes and losses in public revenue. Diversified and uncoordinated approaches of particular states towards tax regulations for digital economy further complicate the situation, emphasizing the need for international cooperation.

The lack of physical presence of companies, as well as the proposals for reforms that individual countries strive to implement to counter tax avoidance, is becoming a serious challenge. The development of a fair and efficient taxation system in digital economy and the analysis of the effectiveness of existing solutions, such as a global minimum tax and unilateral taxes on digital services, are among the proposals that, on the one hand, will ensure budget revenues of individual countries, and, on the other hand, will encourage the continued operation of corporations. International initiatives, such as the two-pillar OECD agreement, and unilateral actions by individual countries should also be taken into account, assessing their potential impact on the elimination of tax gaps and ensuring fair distribution of income.

SPECIFIC NATURE OF DIGITAL INCOME TAXATION

In the face of the growing dominance of digital economy, taxation of income generated in this sector is becoming a key challenge for tax systems around the world. So what is digital economy and the related problems of identifying sources and the global concept of revenues, including difficulties in assigning income

to specific jurisdictions? The analysis of these issues allows for a better understanding of how global changes affect traditional approaches to taxation and what reforms are necessary to adapt to the new reality.

Thanks to the dynamic development of technology, digital economy is significantly transforming the global market, replacing traditional business models with solutions based on innovation. Examples such as e-commerce platforms, social media and cloud services are proof of the growing role of digitization in the global economy. Estimates indicating an increase in the share of digital economy in global GDP from 4.5% to 15.5% and its potential in Poland (projected growth to 9–15% of GDP by 2025) emphasize the strategic importance of this sector for future economic development (Cabańska et al., 2024, p. 23; Szczepański, 2021, p. 2). In 2023 the share of digital economy in global GDP reached at least 50%, which not only proves its dominant position, but also shows the challenges associated with its taxation (Wawrzyniak et al., 2020, p. 8).

Digital data and technology are key factors in digital economy. The competitive advantage of enterprises is determined by the number of users using their platforms, the amount of data processed and the effectiveness of their monetization. Companies such as Google and Amazon use these elements to maintain their dominant position on the global market. In Poland, the development of digitization of economy supports the competitiveness of enterprises on international markets by increasing their operational efficiency. Nevertheless, it should be stressed that the global activity of such companies, combined with the lack of physical presence in the countries where revenues are generated, allows tax avoidance on an unprecedented scale. The limitations of traditional tax systems, which are largely based on the physical presence of a company, pose a serious challenge to regulators (Morawska, 2022, p. 1; Szczepański, 2021, p. 2).

The artificial transfer of profits to countries with lower tax rates by international technological giants poses a significant problem. It is estimated that such practices result in the loss of as much as 13% of CIT income throughout the European Union, which corresponds to annual losses of 60 billion euros. The scale of this problem significantly burdens the budgets of the EU member states, at the same time confronting the legislators with the need to implement effective regulations in the area of taxation of digital enterprises (Wawrzyniak et al., 2020, p. 20). This underlines the need for global cooperation and for more coherent and transparent tax systems.

Differentiating effective tax rates between digital and traditional businesses is another important challenge. In 2017, the average effective tax rate in the EU was 8.5% for digital businesses, while for traditional businesses it ranged from 20% to 23% (Ilin et al., 2019, p. 90). The difference, ranging from 12% to 15% of the value of the entire digital sector, poses a serious financial challenge for state budgets. The gap underlines the need for urgent reforms of tax systems that could redress competition between the two types of companies.

The taxation of digital businesses is hampered by the fragmentation of international regulations. The lack of uniform rules on the taxation of digital revenue favors the phenomenon of base erosion and profit transfers. In response to these problems, there are international initiatives, such as the OECD proposals, which aim to unify the approach to taxation of digital revenues. Since 2012, the OECD has been introducing concepts that, among others, take into account the number of online platform users or the amount of data collected in a given country as indicators of the value generated on the local market (Morawska, 2022, pp. 5–6). However, such solutions require extensive international cooperation, which is hindered by differences in the interests of individual countries.

Another important challenge is to determine the value of data generated by users of digital platforms and their impact on

business revenue. The number of active users and the amount of data generated, such as in the case of Facebook or Amazon, directly translate into the revenues of these companies (Morawska, 2022, p. 8). One example is the Polish market, where in 2018 Google declared revenue of 382 million zlotys, and Facebook 52 million zlotys (Wawrzyniak et al., 2020, p. 21). However, the lack of international regulations or clear principles of data value analysis further complicates the process of effective taxation of this sector.

When considering activities related to digitization, attention should also be paid to the investments of enterprises in modern technologies. Adapting new tools based on user data and artificial intelligence requires not only significant financial outlays, but also a responsible approach to compliance with tax regulations. In this context, it should be noted that the dynamic development of digital technologies affects not only companies operating exclusively in the digital sector, but also traditional companies. The results indicate that as many as 67% of non-knowledge-based organizations and 54% of knowledge-based organizations recognize the significant impact of modern technologies on their operations. In addition, 71% of managers from companies outside the knowledge-based sector and 48% of companies from the sector consider the development of digital economy to be a significant factor shaping modern market conditions (Kupczyk & Kubicka, 2010, p. 12). This data shows that digitization is constantly redefining traditional management models, while forcing companies to adapt their operational and tax strategies.

According to the latest OECD estimates, the implementation of international tax reform could result in substantial increases in global tax revenues. Under Pillar One, which reallocates taxing rights over a portion of the profits of the largest multinational enterprises, the projected revenue ranges between USD 13 to 36 billion annually. Meanwhile, Pillar Two, introducing a global

minimum corporate tax rate, is expected to generate approximately USD 220 billion per year (OECD, 2023).

Challenges in identifying sources of revenue

Identification of revenue sources in digital economy is one of the key challenges in modern tax systems due to the lack of physical presence of many enterprises in the countries where they generate revenue. The traditional fixed-plant approach is proving insufficient for entities such as Google, which can simultaneously operate in many countries without a permanent location. This situation leads to difficulties in assigning revenues to a specific tax jurisdiction, which effectively limits the ability of particular states to enforce due taxes (Moravian, 2022, p. 1; Igbinikaro & Adewusi, 2024, p. 1).

An example of such a problem is the Polish advertising market, where international corporations such as Facebook and Google report a turnover of 434 million zlotys, although their actual revenues may amount to about 2.3 billion zlotys (Zygmuntowski et al., 2020, p. 12). These differences result from the limitations of tax systems that do not take all aspects of virtual activity into account. The lack of financial data consistent with reality prevents reliable analysis and burdens state budgets, which indicates the need to change regulations.

Tax loopholes are also used by multinational companies to transfer profits to countries offering more favorable tax conditions. Thus, developing countries experience losses in excess of USD 500 billion per year, significantly limiting their ability to implement socio-economic policies (Onuoha & Gillwald, 2022, p. 5). Such transfers also make it difficult to monitor financial flows, which further complicates the identification of digital revenue sources.

An additional challenge is the processing and storage of data in different countries, which are usually not directly linked to the place where they are generated. For example, digital platforms

such as Google and Facebook collect huge amounts of user data, which are then analyzed and used in commercial processes, regardless of the location of users (Morawska, 2022, p. 8). Current regulations are not able to precisely indicate which jurisdiction the actual added value is generated in.

The OECD has proposed that the number of users, the regularity of remote contracts and the amount of data collected should be key indicators of economic activity in a given country. However, the implementation of these indicators requires further refinement so that they can effectively identify real sources of revenue (Morawska, 2022, p. 8). Without these changes, the tax gap in the digital sector will remain a significant challenge, as illustrated by the effective tax rate in the European Union at 8.5%, significantly lower than 20–23% in the traditional sector (Zygmuntowski et al., 2020, p. 12). This low level of taxation highlights the difficulties associated with the non-adaptation of digital revenue tracking and taxation tools.

Assessing the value of user data, which makes up a huge portion of digital business revenue, is another concern. For example, in Poland, although the revenue declared by Google and Facebook amount to 382 million zlotys and 52 million zlotys respectively, the value of data collected from Polish users probably significantly exceeds these amounts (Zygmuntowski et al., 2020, p. 12; Morawska, 2022, p. 1). The current lack of clear principles for analyzing the value of data shows the inadequacy of the existing tax systems.

Similar challenges arise when attempts are made to determine which part of the value of a product offered by e-commerce platforms such as Amazon comes from digital activities (e.g., customer data processing) and which concerns more traditional elements, such as physical logistics (Zygmuntowski et al., 2020, p. 12). The lack of common standards in this area allows international companies to make favorable tax planning, which exacerbates the problem of tax base erosion. In the EU, losses resulting from profit

transfers reach about 60 billion euros per year, which illustrates the scale of the problem (Wawrzyniak et al., 2020, pp. 16, 20).

The erosion of the tax base particularly affects developing countries, which often do not have adequate tools to identify and tax digital income. Often these countries struggle to implement an effective and efficient tax system covering local problems, and an additional area of implementation of international requirements may cause additional problems. As a result, they are deprived of significant tax revenues, which annually costs them over USD 500 billion (Onuoha & Gillwald, 2022, p. 5). The example of Uganda, where the excise tax on social applications was introduced but failed to capture the revenues of global corporations, points to restrictions on local regulations (Onuoha & Gillwald, 2022, p. 8).

Additionally, in countries such as Nigeria and Cameroon, where digital economy is still developing, poor internet and energy infrastructure further limits the possibilities of effective taxation of digital income (Onuoha & Gillwald, 2022, pp. 6, 15). The taxes on digital services introduced by these countries indicate difficulties in implementing such solutions when faced with the scarcity of basic resources.

The OECD's work on global coordination of digital taxation highlights the need to develop common infrastructure and principles that are easily implemented technically and administratively also in less developed countries (Moravian, 2022, p. 5). In a global context, it is also necessary to take into account the specific nature of informal economies, which cover a significant proportion of financial flows. Although the informal economy is gradually decreasing in developed countries, the problem remains severe, especially for the digital sector (Sosnowski, 2017, p. 130).

Addressing these challenges requires international collaboration and the use of advanced digital tools to map financial flows. Only in this way is it possible to effectively determine the actual place of value generation and assign income to the relevant tax jurisdictions (Morawska, 2022, p. 8). There is an urgent need to

harmonize the rules for taxing digital income to counter the erosion of the tax base and to promote a balance in the global tax system.

International aspects of digital taxation

Faced with the rapid digitization of the economy, international aspects of taxation are becoming a key issue that requires global cooperation and synchronization. Issues related to OECD initiatives and tax competition in the digital age are the foundation for understanding the challenges faced by states in the field of effective taxation of digital income. The analysis of these aspects reveals the need for reforms and adaptation of tax systems to respond to dynamically changing market conditions, while ensuring a fair distribution of tax revenues on a global scale.

For many years, the OECD has been analyzing tax challenges arising from the digitization of the economy, initiating international discussions on tax reforms. The organization identified a mismatch between traditional tax systems and dynamic changes in the digital economy as early as in 2012 (Moravian, 2022, p. 5). This problem is largely due to the fact that classical systems are based on the physical presence of the company as a tax base, which turned out to be insufficient in the case of digital companies generating significant income in countries where they do not formally operate. In this context, the OECD has proposed a two-pillar approach that includes the allocation of tax rights and the introduction of a global minimum tax of 15% (OECD, 2023, p. 7). Both pillars are aimed at solving the problem of tax base erosion and profit transfer to tax havens, which, according to the data, resulted in the movement of 3 trillion dollars by American corporations in 2017 (Clausing et al., 2021, p. 2).

The first pillar introduces significant changes in the classical approach to the allocation of tax rights. So far, the basis for determining where a company should pay tax was its physical presence in a given country. In the case of digital economy, where

value is created mainly by users of online platforms and the data they generate, this approach is insufficient. The OECD proposes that the indicators of economic activity in a given country are the number of active users, regular conclusion of remote contracts and the amount of data collected from users (Morawska, 2022, p. 8; OECD, 2023, p. 9). This is a step towards better alignment of tax regulations with the specifics of digital economy, where user activity plays a key role in generating revenue. However, such a change requires precise analyses and broadly understood international cooperation. Examples show that the implementation of these indicators can lead to conflicts between states over the distribution of tax revenues, which further complicates their full implementation. It should also be emphasized that the effectiveness of this solution depends on the clarity and objectivity of the criteria and their universal nature.

The second pillar focuses on the introduction of a minimum global tax on the income of international multinational groups. The GloBE (Global Anti-Base Erosion) rules that govern this issue require companies to calculate an effective tax rate (ETR) in each jurisdiction, and in the event of an insufficient level of taxation imposing a top-up tax (OECD, 2023, p. 9). The global minimum tax of 15% is an attempt to limit international tax competition and the transfer of profits to tax havens. The OECD estimates that these rules generate around 150 billion dollars in annual tax revenue worldwide (OECD, 2023, p. 7).

In addition, the reduction of tax competition pressure, which contributed to the decrease in the average CIT rate from 49% in 1985 to 23% in 2019, may result in a greater stability of public finances (Clausing et al., 2021, pp. 1–2). However, the introduction of a global minimum tax brings with it challenges related to differences in benefits for developed and developing countries. High-income countries will gain about 18% of additional tax revenues, while middle and low-income countries will gain about 3% and 1% respectively (Moravian, 2022, p. 14). For this reason,

the implementation of GloBE requires additional solutions to support developing economies, so as not to aggravate existing economic inequalities.

The solutions proposed by the OECD are supported by unilateral actions carried out by states, such as taxes on digital services (DST). France, Austria and Spain have introduced their own regulations that allow taxation of revenues generated by digital companies on their markets (Szczepański, 2021, p. 4). For example, the French DST applies to companies with a global turnover of more than 750 million euros, and the Austrian tax of 5% covers similar categories of enterprises (Szczepański, 2021, p. 4). Such actions are intended to temporarily fill gaps in international regulations, but their unilateral nature may lead to commercial disputes and inconsistencies in the global tax system (OECD, 2023, p. 7). This shows that, while local initiatives are justified, they will ultimately not replace the need for global coordination. Mamajek (2022, p. 140) points out that unilateral introduction of DST taxes, despite its positive impact on reducing tax avoidance, may lead to significant international tensions, requiring appropriate dialogue at the global level.

It is also worth noting that changes in the taxation of the digital sector have administrative consequences and require precise legal regulations. For example, Wieśniak-Wiśniewska and Czerwinski (2016, pp. 22–30) note that the introduction of new regulations, such as the taxation of electronic services in the EU since 2015 is a response to the changing needs of the digital market, but at the same time requires a coordinated approach to monitoring financial flows. This process is necessary to effectively implement the international arrangements undertaken within the OECD initiatives as well as global tax mechanisms in an efficient and sustainable manner.

Tax competition in the digital age leads to lower tax rates by states competing to attract investment from international digital businesses. The trend is particularly noticeable in developed

countries, where the reduction of CIT rates is becoming an economic policy tool aimed at increasing investment attractiveness. Since 1985, the average global CIT rate has fallen from 49% to 23%, reflecting the intensification of international tax competition (Clausing et al., 2021, pp. 1–2). States seeking to attract international investors often ignore negative social and fiscal impact, such as increasing tax inequalities and a reduction in public service funding. This type of tax policy results in the erosion of the tax base, which in the long run may destabilize public finances of many countries. Paradoxically, although tax competition attracts investment, it also contributes to the deepening of socio-economic problems, which requires more balanced and thoughtful regulatory action.

The tax haven as a tool of tax competition continues to challenge the global tax system. Corporations such as Google and Amazon often move their profits to jurisdictions with lower tax rates, resulting in significant losses for countries where income is actually generated. The OECD estimates that 40% of global direct investment (FDI) is structured not on the basis of real economic activity but to avoid taxes (Szczepański, 2021, p. 2). Structural organization of investments for tax purposes only distorts market competition by allowing firms optimizing their tax obligations to gain an advantage over full-tax companies. Such practices destabilize tax systems around the world, weakening the ability of states to implement public policies. The inclusion of GloBE (Global Anti-Base Erosion) rules within the OECD could limit the transfer of profits to tax havens, but the effectiveness of these actions will depend on obtaining a broad political consensus between countries.

Countries such as Ireland and Luxembourg attract multinational corporations with favorable CIT rates, which increases the phenomenon of tax base erosion. Ireland, offering a rate of 12.5%, is an example of a country that consciously uses tax policy to build its investment attractiveness. However, such actions often

take place at the expense of other European Union countries that lose potential tax revenues (Wawrzyniak et al., 2020, pp. 16, 20). The practices followed by Luxembourg, such as the creation of holding-friendly regulations, further complicate the situation as they enable corporations to avoid taxation both locally and internationally. The losses resulting from these activities have a negative impact on the budgets of countries with higher CIT rates, undermining their ability to finance key infrastructure and public services sectors. The introduction of uniform principles at European Union level, such as a common consolidated corporate tax base (CCCTB), could counteract such practices, but the implementation of such solutions requires broad political support.

Tax competition has a particularly negative impact on low-income countries, which, due to limited budgetary possibilities, cannot offer preferential tax rates. These countries find it difficult to compete with developed jurisdictions or tax havens, which limits their ability to attract investment in international capital. The OECD states that the introduction of a global minimum tax of 15% would increase the income of high-income countries by 18%, contrasted with only 1% for low-income countries (Moravian, 2022, p. 14; Szczepański, 2021, p. 7). These inequalities highlight the limitations of existing regulatory proposals, which, despite their positive potential, can exacerbate economic disparities between developed and developing countries. Therefore, low-income countries should simultaneously develop local digital markets and invest in technologies to increase their international competitiveness. It has also been pointed out that these policies should include not only new tax mechanisms, but also administrative and infrastructure support, which will allow them to compete more effectively on the global market (Vishnevskiy et al., 2022, p. 3).

Digital services taxes (DSTs), such as those introduced in France, Austria or Spain, are an attempt to counteract the effects of global tax competition. France introduced the DST tax in 2019, covering companies with a global turnover of over 750 million

euros (Szczepański, 2021, p. 4). This initiative aims to tax large digital corporations that previously avoided taxation through profit transfers on revenues generated on the territory of the state. Austria has taken similar action by introducing a tax of 5% for companies with a global turnover of at least 750 million euros and a domestic turnover of 25 million euros (Szczepański, 2021, p. 4). Although such initiatives strengthen the ability of particular states to protect fiscal interests, their unilateral nature leads to the risk of trade tensions and increased administrative costs. The common goal of these countries is to reduce tax gaps in the absence of global OECD regulations, but the effectiveness of DST depends on long-term international coordination. Moreover, the introduction of new taxes, such as DST, shows how European countries are committed to protecting public budgets from further erosion of the tax base, but need global initiatives to complement them (Poniatowska-Jaksch et al., 2016, p. 16).

The digitization of the economy and the growing volume of user data in different countries are reinforcing asymmetries in attracting investment, further increasing the pressure to harmonize tax systems. Cross-border data flows make it difficult to identify revenue streams generated by digital enterprises, making developed countries with advanced digital markets more profitable in terms of global investment than developing countries. The introduction of GloBE principles by the OECD, taking into account the global minimum tax of 15%, is a response to these problems, but the effectiveness of this solution depends on extensive international cooperation and the development of appropriate implementation mechanisms (Tsindeliani et al., 2019, p. 2; Morawska, 2022, p. 6). The development of e-taxation technologies, for example in South Korea, can set an example for global efforts to eliminate tax asymmetry, but this requires significant technological and financial support for lower-income countries. Such actions also show the potential impact of new technologies on the modernization of tax systems, which is also in

line with considerations on the wider role of technology in global economy, as indicated in the analyses on the circular economy in the Netherlands (Hausner & Paprocki, 2017, p. 23).

Therefore, tax competition in the digital age leads to numerous tensions in the global tax system, which requires more coordinated action at international level. Harmonization of taxation rules, accounting for the global minimum tax and coordination of profit transfer rules, is key to ensuring a fairer distribution of tax revenues and reducing the negative effects of base erosion.

THE CONCEPT OF GLOBAL MINIMUM TAX

The concept of a global minimum tax rate of 15% within the OECD initiative to prevent tax avoidance and limit the transfer of profits to tax havens was agreed upon by nearly 140 countries. The introduction of the regulation is based on universal application, which significantly reduces the possibility of tax arbitrage between countries offering different CIT rates. The minimum global tax fills a significant gap in tax systems, particularly given that base erosion and profit transfers result in losses of between 4% and 10% of annual CIT receipts for OECD countries (OECD, 2023, p. 9; Vishnevskiy et al., 2022, p. 3). Reducing the downward pressure on CIT rates resulting from tax competition also contributes to a fairer distribution of tax revenues and greater stability of financial systems (Clausing et al., 2021, pp. 1–2). The alignment of these global principles represents a breakthrough in the international approach to taxation and clearly points to the need for multilateral cooperation in this area.

The provisions introduced by the OECD under the GloBE rules require multinational groups with annual revenues exceeding EUR 750 million to calculate an effective tax rate (ETR) in each jurisdiction. If the ETR is less than 15%, an additional top-up tax must be imposed to supplement the missing amount. This action

provides more transparent financial reporting and more effective prevention of profit transfers to low-tax countries (OECD, 2023, p. 9; Vishnevskiy et al., 2022, p. 3). These rules not only support local jurisdictions in securing minimum tax revenues, but also reduce the risk of income loss to other countries. The additional levy mechanism allows for a fairer distribution of tax revenues, especially in situations where multinational groups generate significant revenues where taxation is minimal or absent (OECD, 2023, p. 10). However, the effectiveness of the mechanism requires high-tech monitoring tools, challenging less developed administrative systems (Awasthi et al., 2022, p. 25).

Reducing competitive pressure in tax markets is one of the key effects of the global minimum tax. Such dynamics were driven, among other things, by the actions of countries offering preferential tax systems in order to attract international investors. The introduction of a global minimum tax limits these practices while promoting a fairer distribution of tax revenues between states. The OECD estimates that as much as 40% of global direct investment (FDI) was previously structured solely for tax benefits, which had a negative impact on the tax systems of the target countries (OECD, 2023, p. 9; Vishnevskiy et al., 2022, p. 3). Effective reduction of these practices may also have a positive impact on market competition, reducing the advantage of companies using aggressive tax optimization over those that avoid taxation to a lesser extent.

The effectiveness of GloBE principles is emphasized by their wide application, covering most international corporations. The OECD estimates the annual additional tax revenues resulting from these regulations at around 150 billion dollars, which will significantly contribute to the budgets of countries struggling with financial deficit (OECD, 2023, p. 12). The application of these principles also affects the harmonization of tax policies and reduces the risk of conflicts between countries in the allocation of tax rights (Mozgiel-Wiecha, 2021, p. 11). In addition, the promotion

of more transparent tax mechanisms may stimulate greater investment in public infrastructure, which in the long term supports both economic and social development (Morawska, 2022, p. 14). The introduction of a global minimum tax can also be seen as an inspiration for greater inclusion of developing countries in the international tax system, reducing their dependence on foreign aid (Awasthi et al., 2022, p. 3). Nevertheless, the effectiveness of applying GloBE principles largely depends on political consensus between states and precise implementation of regulations.

The introduction of a global minimum tax highlights clear differences in the benefits between developed and developing countries. High-income countries expect tax revenues to increase by 18%, while for low-income countries this increase is only 1% (Morawska, 2022, p. 14). This disparity is primarily due to more developed tax administration systems in rich countries that are better able to enforce new regulations. Developing countries, on the other hand, often face limited technological and financial resources, making it difficult to implement advanced tax control systems (OECD, 2023, p. 7). In such a situation, it is important to provide technical support by international organizations such as the OECD, which will enable more effective introduction of new tax standards (Awasthi et al., 2022, p. 25). A good example of the effectiveness of technology in tax administration is South Korea, where as early as in 2015 as many as 91% of taxpayers submitted declarations electronically, which significantly reduced administrative costs (Awasthi et al., 2022, p. 19).

It is also worth noting that the introduction of a global minimum tax affects broader aspects of digital economy, such as financial flows in systems based on modern technologies. Increasing the global tax burden on corporations can impact investments in innovative market segments and digital technologies that are already being used in many economies. For example, the phenomenon of digitization, including the popularity of cryptocurrencies such as bitcoin, highlights new challenges for tax systems. In 2016,

there were about 15.5 million bitcoins in circulation, and their maximum number was programmed for 21 million units, which makes them resistant to monetary inflation (Soloma & Spychalski, 2017, pp. 1–2). However, such technological solutions may lead to the creation of new tax gaps in digital economy, which requires further development of the regulatory framework.

The concept of a global minimum tax is therefore a crucial step towards harmonizing the global tax system, counteracting the negative effects of base erosion and profit transfers to tax havens. However, to fully exploit the potential of this tool, further action is needed to support developing countries to participate effectively in the global tax system.

SUMMARY

Taxation of income generated in the digital economy, in the context of its growing dominance in the global economy, is one of the most important challenges of modern tax systems. The specificity of the digital economy, the identification of the main tax problems in the sector and the definition of prospects for tax reforms, taking into account international initiatives such as the OECD approach and unilateral actions implemented by individual countries, is becoming a major global concern. The implementation of the set goals enabled a comprehensive reflection on the possibilities of creating a fair and effective taxation system for digital enterprises and indicating the directions of future reforms.

Analysis of the experience to date indicates that the specific character of digital economy, based on the global reach of enterprises, the use of user data and the lack of physical presence in many countries, leads to significant difficulties in identifying revenue sources. Phenomena such as profit transfers to tax havens and the erosion of the tax base cause annual losses of more than billions of dollars, which particularly affects developing

countries. In addition, asymmetry in effective tax rates between digital and traditional companies, reaching up to 15%, exacerbates inequalities in fiscal burdens and enforces urgent tax reforms. This problem has been diagnosed at both regional and global levels, leading to numerous initiatives such as international arrangements within OECD cooperation.

The analysis showed that the two-pillar approach proposed by the OECD, including the allocation of tax rights and the introduction of a global minimum tax of 15%, presents a real solution to many of the difficulties associated with modern taxation of the digital economy. The first pillar tries to adapt traditional tax systems to the realities of digital activity by taking into account indicators such as the number of users or the amount of data generated. In contrast, the second pillar, which involves the implementation of a minimum global tax, aims to limit international tax competition and profit transfers to low-tax jurisdictions. The introduction of these rules could generate an additional 150 billion dollars in annual tax revenues and affect the greater fiscal stability of countries. At the same time, attention has been drawn to the fundamental limitation of these initiatives, namely the potentially uneven benefits for countries with different levels of income and administrative advancement.

Analyzing unilateral measures such as the introduction of DSTs in France and Spain, it has been shown that they are a useful tool in counteracting the erosion of the tax base, but at the same time highlight the lack of global harmonization. Such initiatives allow digital corporations to be taxed in markets where they actually generate revenue, but their fragmentation and ambiguity can lead to trade tensions and administrative burdens. In turn, tax competition, as exemplified by tax havens such as Ireland or Luxembourg, still remains a significant challenge, which further undermines the financial stability of countries with higher CIT rates. It was emphasized that effective counteraction to these practices requires coherent and globally coordinated regulations.

On this basis, it can be concluded that achieving a fair and efficient taxation system in digital economy is possible, but requires an integrated approach considering the needs of both developed and developing countries. The introduction of a global minimum tax is an important step towards reducing fiscal inequalities, but its full effectiveness depends on technical and administrative support offered to less developed countries. At the same time, the need for further development of administrative technologies, such as digital e-tax systems, which significantly increase the efficiency of enforcement of new regulations, has been noted.

Prospects for future action include the need to continue cooperation between countries and to invest in innovative technologies to support tax administrations. It is also important to examine the long-term effects of regulations such as the global minimum tax and their impact on corporate tax strategies. Further analyses should take into account the specificity of developing economies, offering recommendations for improving their position in the global tax system. Finally, the development and implementation of harmonious and transparent mechanisms at international level remain crucial to ensuring balance and fairness in the taxation of digital economy.

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