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Should Tax Risk Be Identified Solely With the Private Sector? Tax Gap and Risk Management in Public Sector: The Case of Poland[1]

Keywords: public finance sector; tax risk; risk management; tax gap

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Abstract

Theoretical background: The article emphasizes the essence of tax risk interpreted from the perspective of fiscal authorities. The study is an invitation to initiate an in-depth scientific discourse on taking into account tax risk in the state's financial policy. The study argues that tax risk management *sensu stricto* should be an integral part of modern and integrated management at every level of state authority. A deeper insight into tax risk in the context of noncompliance, but also in the broad sense of public liabilities management, is justified by many reasons. Government and local government finances are not immune to disruptions in fiscal policy-making, the costs of which are borne by society and the economy. The responsibility for this lies with those who, as economic analysis shows, act rationally, but evidence of a lack of fiscal discipline is also an element of the puzzle, which should in principle ensure responsible financial management. Thus,

[1] This research was co-financed by the Minister of Science under the "Regional Initiative of Excellence" programme, agreement no. RID/SP/0039/2024/01; subsidised amount: PLN 6,187,000.00; project duration: 2024–2027.

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better tax risk management at every level of the General Government sector underlines the importance of financial resilience to unexpected shocks, countercyclical policy and, political credibility.

Purpose of the article: The objective of the study is to scientifically identify the essence of tax risk and to provide a comprehensive analysis of tax risk management from the perspective of fiscal authorities. To achieve this goal, three specific objectives were adopted: defining tax risk, justifying the linkage between tax gap and compliance risk management and emphasizing the necessity to monitor this risk in the established financial policy at every level of the state.

Research methods: The verification of the research hypothesis is based on an in-depth examination of the literature on the subject and the information from reports of national and international institutions. An economic analysis of the tax gap was made, using data from the Ministry of Finance and the Central Statistical Office. Estimates for Poland are provided covering both central and local government sub-sectors. This fills the research gap and gives the research an innovative character. The research covered the period of 2003–2023.

Main findings: The findings emphasize the need for a systematic approach to understanding and managing tax risk within public sector finances. Effective management requires integrating both internal and external risks arising from the relationship between taxpayers and tax authorities. Relying solely on unpaid taxes provides an incomplete view of tax risk. A holistic approach that considers non-compliance, tax errors, and discretionary policies is essential for accurately assessing lost revenues. Discretionary decisions in tax policy can impact tax risk differently across various government levels. To minimize tax risk effectively, implementing a comprehensive tax risk management framework at all levels of public authorities is crucial.

Introduction

In reforming tax policy, authorities are supported by international institutions such as the Intra-European Organisation of Tax Administrations (IOTA) and the Inter-American Center of Tax Administrations (CIAT) which promote fair, balanced, and effective tax collection systems. According to CIAT, "in almost all tax administrations of OECD countries and Latin America, there is a growing recognition of the need to apply risk analysis or, more comprehensively, compliance risk management." Similarly, the International Monetary Fund (IMF) recommends estimating the tax gap and using the results to evaluate the progress in narrowing it, as well as to assess levels of tax morale (Thackray & Ahmed, 2018). It is also suggested to extend gap estimates to other taxes and use its analysis as a basis for strategic management of non-compliance risk.

Although the concept of tax risk is widely used by fiscal authorities and international institutions it has not yet been thoroughly described in the literature. In scientific publications, risk and its management in the public sector are most often considered in the context of management control, and also as an element of New Public Management, rather than as a component of integrated management supporting a compliance risk management strategy (CIAT, SII, & IMF, 2022; European Commission, 2023, p. 83; Hutton, 2017, p. 21; OECD, 2004). The proposed research seeks to fill this gap, particularly by examining both internal and external tax risks associated with the activities of tax authorities at various levels of the public sector.

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The study argues that tax risk management in the strict sense should be an integral element of modern and integrated management at every level of state authority, with all available instruments in place. The research hypothesis is verified by reviewing relevant literature, legal frameworks and reports from national and international institutions. The objective of the study is to scientifically identify the essence of tax risk and to comprehensively analyse tax risk management from the perspective of fiscal authorities within the framework of international standards. To achieve that, three specific goals were adopted: (1) to define the concept of tax risk, (2) to justify the link between tax gap and compliance risk management, and (3) to emphasize the necessity to monitor this risk in the established financial policy of the state. Estimates for Poland are provided, covering both central and local government sub-sectors. To assess the tax gap, an economic analysis based on the top-down approach was employed, using data from the Ministry of Finance and the Central Statistical Office (GUS). The study covers the most recent period from 2003 to 2023.

Literature review

Tax risk is relevant not only to entities in the private sector, but also to institutions of the public finance sector (Bracci et al., 2021; Strauss et al., 2020). In the traditional or classical approach, risk is interpreted quite narrowly, as the probability of an unfavourable effect. Currently, it is defined in the context of neutrality, which means the risk of any event (European Commission, 2010; Piaszczyk, 2020, p. 45). In science, it is perceived as a loss, uncertainty or a threat, but also the probability of a profit or obtaining benefits from an action (Drennan et al., 2014, 2024). Most authors agree that risk is hard to define (Starostina et al., 2019, p. 469). Many define risk depending on the context or the organization. In principle, it is therefore a matter of individual perception and reaction to the unknown.

The literature on tax risk in the public sector is still quite limited, as is the literature dealing with the management of this risk in the public sector. This is true for both national and international literature where the number of relevant publications seems to be negligible. Even though the risk has been included in legislation such as national provisions of general tax law in Poland (Entrepreneurs' Law, 2018; Tax Ordinance, 1997;), as well as in the practical undertakings of tax authorities (Ministerstwo Finansów, 2004a, 2004b, 2014), it has not yet been described in detail. Meanwhile, external risk management has been an element of the strategy of the institutions shaping the public sector in OECD countries for more than two decades (OECD, 2004; Ministerstwo Finansów, 2004b). Many governments – such as those of the USA, the UK, Australia, and Sweden – have well-developed tax risk management practices. In practice, rather than in academic research, greater emphasis is placed on tax risk and the need for its effective management (Czinege, 2019; HM Revenue & Customs, 2025; Petrova, 2022; Whait, 2012; Yubero & Collosa, 2021).

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The reason for this does not seem to be the little scientific appeal of the subject, but the treatment of tax risk in classical terms, exclusively through the prism of the grey economy and related tax frauds.

The concept of risk in the private sector has significantly influenced its definition in the public sector, emphasizing uncertainty (International Organization for Standardization, n.d.; Kline, 2019), which can be either probabilistic or epistemic (Howell et al., 2010, p. 258). In relation to the public sector, it is mainly the second type of uncertainty that characterizes decision-making (Lochte, 2012, p. 5). Tax risk most closely parallels financial risk, including budgetary risk related to planning and obtaining income, which has been comprehensively described in several new studies, such as Drennan et al. (2024, p. 3), Burzyńska (2023, pp. 33–36), or Dolewka (2020, p. 32). Biernacki (2017, p. 1) also addressed tax risk, linking it to tax settlements and considering both the taxpayer's perspective and the state's perspective. He defines tax risk as the lack of planned budget revenues, a definition that effectively captures the core of the concept. According to theory, this risk consists of internal and external risk (European Commission, 2023, p. 83). While both relate to achieving fiscal goal, they differ in source. Internal risk is related to the processes that the tax administration faces as an institution (i.e. organizational structure, information technology, communication or decision-making and planning). In contrast, external risk is linked to the behaviour of users of the tax system (OECD, 2004). This distinction is echoed by Ostachowski and Sanetra-Półgrabi (2022) and Biernacki (2017). The first relates to the formation of macroeconomic factors. The second is formal and concerns the assessment, control and collection, including the risk of functioning of tax institutions, and material, concerning the construction of the tax. Tax risk determines and is influenced by the efficiency of tax collection. Low efficiency may be a derivative of higher tax risk. Nevertheless, low risk may reflect institutional efficiency.

The efficiency of tax collection is commonly assessed by estimating the tax gap (Baer & Silviani, 1997; Keen & Slemrod, 2017; Thackray & Ahmed, 2018), defined as the difference between actual tax payments and potential tax revenue (Kelm, 2022). The tax gap is a vital economic indicator used to assess tax discipline in the world. It is a key measure determining the level of taxpayers' compliance. This issue is considered in terms of budget costs and social justice. Small decreases in tax discipline cost the state budget billions in lost revenue and shift the tax burden from those who do not pay taxes to taxpayers who settle tax liabilities on time. The tax gap encompasses not only losses due to the shadow economy, but also tax arrears and uncollected amounts subject to enforcement (Klonowska, 2017). Thus, the tax gap should not be identified only with illegal tax evasion. According to the U.S. Internal Revenue Service (2023), the gross tax gap includes refundable and non-refundable tax reliefs. It is the difference between the estimated (potential) tax liability for a given period and the amount of tax paid on time. The gross tax gap arises from non-filing, underreporting and underpayment of tax (OECD, 2024, p. 193). Therefore, tax arrears

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written off due to decisions of tax authorities should also be included in tax gap estimates. Then, they most accurately reflect the scale of uncollected tax revenues.

As Petrova (2022) argues, "the tax gap is an indication of fiscal risk. The adoption of such concept, results from the fact that there is uncertainty as to the size of the financial consequences of the actions of both parties to the tax relationship" (p. 4). The general trend is that the tax gap has an essential input for compliance risk management. Tax gap analysis can help estimate compliance gaps (Betts, 2022, p. 8), aligning operational goals with strategic objectives, and supporting risk identification at both macro and micro levels. Moreover, the use of tax gap in risk identification ultimately emphasizes its strategic-level importance. So, the integration of tax gap and compliance risk management involves a circular process including fiscal authorities' strategies and actions and monitoring changes in tax compliance (Addis Tax Initiative [ADI], 2024).

It is worth emphasizing that changes in the tax gap do not result from the tax policy design phase. The tax gap reflects actual revenue losses that have occurred and therefore indicates tax risk that has already materialized (*ex post*). However, the tax gap itself does not constitute a direct measure of tax risk, as risk is generally defined as a function of the likelihood of an undesirable event and its consequences. Hence, the tax gap is often disaggregated to provide a two-dimensional perspective on risk – based on consequence (i.e. impact on the public budget) and likelihood (e.g. the probability of underreporting) (ATI, 2024). Examining tax gap fluctuations using methods such as standard deviation and/or variance may support tax risk assessment. However, empirical studies employing these techniques tend to focus on evaluating the volatility of tax revenues (Cornia & Nelson, 2010; Rueben & Randall, 2017; Seegert, 2016). This is due to the fact that the assessment of the tax gap must be approached with caution, as the component related to tax evasion reflects only estimations. Tax gap monitoring is, therefore, primarily useful as a measure of revenue loss in medium or long-term trend analysis (Tax Administration, 2024).

It is important to emphasize that a given tax policy may affect not only the size of the tax gap, but also its variance, potentially leading to unpredictable revenue shortfalls associated with higher income volatility. Deviations in the tax gap thus reflect tax risk understood as the market's unanticipated response to a specific tax policy (Chooi, 2020, p. 5). Accordingly, in its simplest approach, the essence of tax risk can be described by a basic model – the difference in tax revenues resulting from the taxes actually collected and the amount of taxes due resulting from the provisions of the law, treated as potential (Booth, 2011, p. 50). Potential tax revenues include those that have not been paid, tax arrears, tax frauds and other shortages resulting from, for example, tax errors (Silviani & Baer, 1997, p. 6). In the literature, they are referred to as *noncompliance* (Andreoni et al., 1998, p. 823).

The tax gap is typically identified with the risk of noncompliance (*compliance gap*), which arises during the implementation of a tax policy. However, as Piwowarski (2022) and Petrova (2022) argue, the policy design also contributes to revenue

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loss – through the policy gap and tax expenditures. The policy gap includes foregone revenues due to tax benefits embedded in the tax code (Chooi, 2020; Durán-Cabré et al., 2019). The broader the policy gap, the more complex the tax system and the greater the potential for abuse. This approach is used by the European Commission (Poniatowski et al., 2023) and other international institutions, including those involved in the ATI (2024).[2] There is a consensus that addressing the tax gap, including both non-compliance (compliance gap) and policy (policy gap), is essential to narrowing fiscal deficits in developing countries.

In this context, the tax gap is defined as the difference between the theoretical revenue that can be obtained, in the absence of tax expenditures (Wyszkowski & Kargol-Wasiluk, 2016), and the actual revenue, including preferences. According to Petrova (2022, p. 3), Piwowarski (2022, p. 35), and Poniatowski et al. (2020, p. 61), the tax policy gap consists of *the rate gap*, i.e. the gap related to the application of reduced and zero tax rates, and *the exemption gap*, i.e. the gap resulting from subject exemptions. This framework is used for taxes to which different tax rates and reliefs are applied. Therefore, it can also be applied to the tax policy implemented by local governments and local taxes, which are their main source of own revenue. This is so especially because no uniform guidelines have been developed for municipalities regarding the identification of risk areas and factors, including financial risk (Burzyńska, 2023, p. 37). The model for understanding tax risk will therefore also work at the level of local governments (municipalities), which rely on deliberative and political mechanisms similar to those in the government sector in deciding on the public budget.

The primary distinction between public and private sector risk management lies in complexity. Public sector risks are shaped by bureaucracy, regulation, and stakeholder interests (Ostachowski & Sanetra-Półgrabi, 2022). This risk affects society at large, imposing greater responsibility on public institutions to safeguard public value (Leung & Isaacs, 2008, p. 510). Bozeman & Kingsley (1998) argue that neither sector is inherently riskier. Rather, they differ in how they respond to the risks identified. In Poland, it was not until 2016 that the authorities decided to implement pro-market solutions in the public sector in order to improve public finances. The actions were intended to change the existing economy of the public finance sector, including the processes related to collecting public funds (Lubińska, 2009, p. 21). The adopted solutions did not find full justification in practice; nor did they provide a comprehensive taxonomy or address the fundamental assumptions and basic elements of the theory of tax risk, as well as its management by entities responsible for tax collection. It is obvious, however, that tax authorities are exposed to tax risk (Cooper, 2010), but awareness of this became the reason the External Risk Management

[2] The ATI Workshop (March 2024) was organized in cooperation with AFRITAC East and FAD IMF, UNU-WIDER and the World Bank, among others. Its aim was to increase the efficiency of tax administration and use the tax gap as a key indicator in this regard.

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Strategy (Ministerstwo Finansów, 2004b) was implemented, adopted by the national authorities relatively early, i.e. in 2004. Over time, the concept became the basis for selecting entities for tax audits, and then a step towards relying on proactive actions and a premise for introducing changes to the law. Currently, the selection of an entity for audit is preceded by an analysis of the risk of noncompliance with tax regulations (Entrepreneurs' Law, 2018).

The implementation of instruments aimed at (a) identifying, (b) analysing (c) classifying, (d) treating, (e) evaluating and (f) monitoring risk areas proves that risk is taken into account by the adopted policy, the standard risk management model (European Commission, 2010) was implemented, and that it is executed within an iterative process to support improved decision-making.

In the adopted model, estimated risk value is the basis for risk assessment. Risk value is defined as the function of negative consequences and the frequency of their occurrence. The consequences include depletion of fiscal income (direct tax losses) resulting from the taxpayer's errors, as well as other possible effects, including social ones, which are considered indirect tax losses, caused by the actions of tax authorities. To express various levels of risk, a descriptive scale comprising three levels was adopted (Table 1).

Table 1. Estimating and describing risk values – basic classification

Source of risk Direct tax losses in the risk area	Level of risk high/medium/low
Indirect tax losses in the risk area	high/medium/low
Indirect tax losses in other areas (taxpayer segments) and other effects	+/0/−*
Overall risk value	high/medium/low

* The symbols +, 0, − are used to refine the assessment of risk value

Source: own elaboration based on the External Risk Management Strategy.

After the risk assessment and prioritization phase, measures are taken to eliminate or mitigate the identified risks using various instruments (e.g. audits, systemic changes, or information campaigns). The objective of the final evaluation phase is to measure the outcomes related to the identified risk areas and to assess the effectiveness of the measures applied. Due to resource constraints, the implementation of a purely risk-based model at the local level has remained limited.

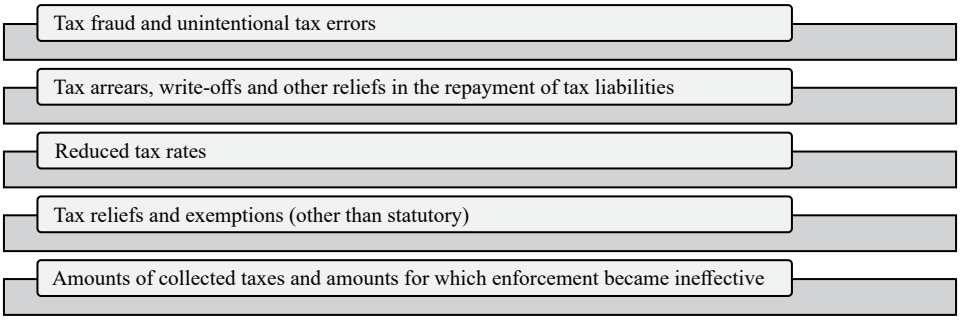
Despite the assumptions outlined by the Ministry of Finance (Ministerstwo Finansów, 2014), no decision has yet been made to monitor tax risk using a specific indicator, such as the tax gap. Such statistics are also not publicly available. Meanwhile, tax risk analysis has been a standard practice in OECD countries for many years (Hasseldine, 2010, p. 16), and tax authorities in the UK, the USA, and Sweden regularly estimate risk in relation to tax revenues.

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An important role in the area in question was played by the EC's 2010 publication, which provided a theoretical and practical framework for compliance risk management (European Commission, 2010). It became a guide for the Polish tax administration by adopting the external risk management strategy. The updated version of this publication (European Commission, 2023, 2024) emphasizes that risk management is a systematic process in which risk assessment is based on objective criteria, moving away from a reactive approach. This shift is not new in Poland. Nowadays, tax authorities make deliberate choices regarding the instruments used to effectively foster compliance and prevent non-compliance. Proactive actions stimulating an increase in voluntary compliance are manifested in the differentiation of tax arrears rates, issuing tax explanations, or enforcement actions that are targeted at high-risk behaviours. As a result, national-level risk analysis allows for more efficient allocation of limited resources to areas of increased risk, while reducing the compliance burden for low-risk taxpayers. The transition from a reactive to a proactive approach promotes the creation of an environment in which taxpayers make fewer mistakes, receive support, and access timely information from the tax authorities. In the digital age, however, this also means increasingly embedding taxation in the daily lives of individuals and businesses, the so-called "seamless" taxation (IOTA, 2024).

Assuming that risk refers to the possibility of a final outcome differing from the expected value, its magnitude is determined by various elements that should be considered in the risk management process. The classification of factors contributing to tax risk, as reflected in the tax gap, brings tangible benefits by enabling policymakers to address the underlying causes of reduced tax revenues in the design of fiscal policy (Figure 1).

Figure 1. Sources of tax risk in the public finance sector

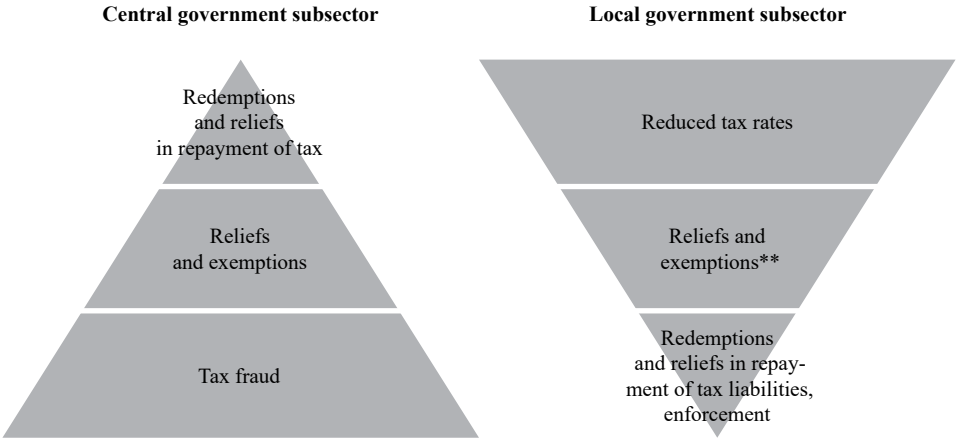


Source: own elaboration.

However, the hierarchy of importance among the elements determining tax risk changes significantly when we consider that the public finance sector includes, among others, the central government and the local government subsectors. At that point, it may be illustrated as follows (Figure 2).

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Figure 2. Hierarchy of areas determining risk in central and local taxes



** – without statutory reliefs and exemptions.

Source: own elaboration based on data from the Ministry of Finance and local government units.

Implementing a sound tax risk management strategy in the public finance sector is crucial to achieving fairness, balance, and efficiency in tax collection across all levels of government. While central government efforts should primarily target tax evasion, local authorities ought to focus on ensuring the legitimacy of tax preferences, improving arrears collection, and applying reliefs in a consistent and transparent manner. Consequently, the issue of tax authority and its economic consequences remains significant.[3] Equally important is the issue of applying so-called "back door" tax preferences, which hinder transparency and contribute to the illusion of fiscal discipline (Dziemianowicz & Poniatowicz, 2017, p. 85).

Local authorities waive revenues that could potentially be collected. If we assume that tax risk refers to the failure to realize planned tax revenues, then such risk arises when tax liabilities expire, when tax authorities decide to write off tax arrears or postpone the payment deadline, or when enforcement measures prove ineffective. Obviously, it is difficult to unequivocally oppose such a policy, as it is conditioned by objective factors. Nevertheless, from the perspective of understanding and classifying tax risk, this aspect cannot be ignored.

[3] In 2020, due to the crisis caused by SARS-CoV-2, it was decided to extend the powers of municipalities in terms of exemptions from property tax and postponing the payment deadlines for instalments of this tax. Resolutions adopted in this regard, which were questioned by the Boards of Regional Audit Chambers due to violations of the law, constituted 16%.

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Methodology, measurement and statistics

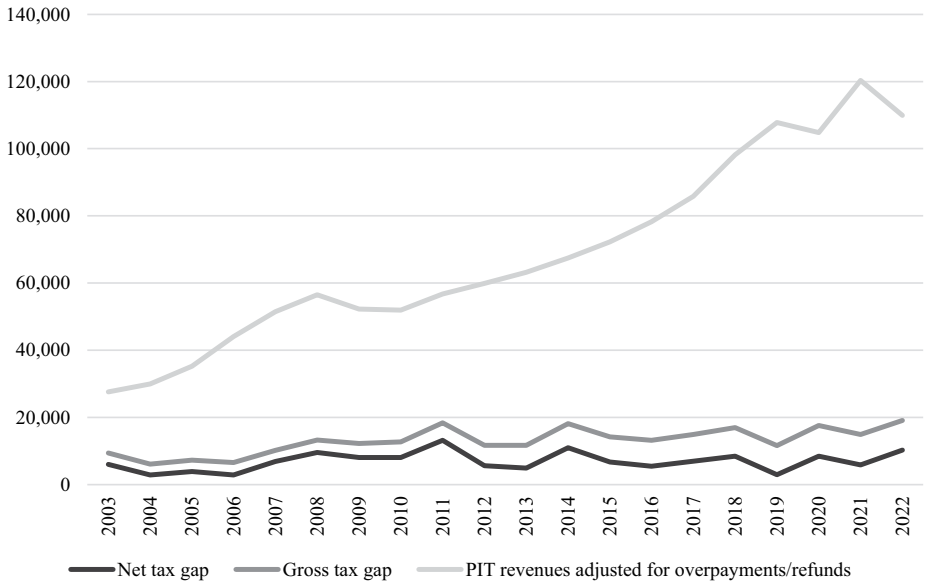
The study covered central and local tax authorities responsible for tax collection. Direct taxes were taken into account, as revenues from these taxes constitute a source of financing public tasks at various levels of the public sector. For the central government subsector, the subject of the analysis is the income tax paid by individuals. The PIT gap was calculated in gross and net terms using the indirect method (Klonowska, 2017, p. 55). For the local government subsector (only municipalities were included), the focus was on local taxes. In this case, the categories that make components of the tax gap, other than non-compliance with tax regulations, were considered, as tax fraud committed in these area is likely of marginal significance. A single, uniform approach to estimating tax risk was not feasible due to the limited availability of public data. The results should be interpreted as indicative estimates, although they do not fully reflect the scope of potential tax risk.

Government subsector

For the government subsector, the measurement of tax risk was based on the tax gap category. Due to data limitations, the analysis period was limited to the year 2022. The calculation results are presented in Table 1 in the Appendix. The study results indicate that tax risk amounts to an annual average of nearly PLN 13 billion (gross tax gap). Half of the estimated figure represents unpaid tax liability resulting from tax non-compliance. Tax risk, as defined in this context, remained at higher levels during the second half of the analyzed period. Nevertheless, the situation may be assessed positively from a relative perspective. From the second half of the period onwards, tax risk accounted for less than 30% of actual tax revenues annually for the gross gap and less than 20% for the net gap. This suggests that the gradual implementation of systemic reforms planned in 2014 and continued over the following decade had a positive impact on the effectiveness of the fiscal authorities' activities and is bringing tangible results. Figure 3 presents the evolution of the tax gap and PIT revenues in nominal terms.

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Figure 3. Tax gap and PIT revenues, 2003–2022 (PLN millions)



Source: own elaboration based on data from national accounts and resources of the Ministry of Finance.

Interesting insights can be drawn from analyzing the pace of changes in tax risk and actual tax revenues. In the former case, the growth rate is much slower, which should be assessed positively, as it does not determine a risk of fiscal destabilization. Nevertheless, the dynamics of tax risk – measured by the net tax gap – remain relatively high in comparison to the dynamics of tax revenues. Only during periods of economic downturn is lower tax revenue accompanied by increased tax risk. The highest values of unpaid taxes (net tax gap) were characterized by years of worse economic conditions and even recession: 2011, 2014, and 2022. However, the period of recession in the economy did not translate into the highest tax risk indicators. This can be attributed to the policy of the authorities supporting private entrepreneurship applied at that time. Conversely, the lowest levels of the PIT gap in net terms occurred in 2004, 2006 and 2019. In years when real GDP fluctuated around 5–6%, the amount of unpaid taxes was the lowest. Changes in PIT-related tax risk thus follow the broader economic cycle, which in this case is partly due to the elasticity of PIT revenues in relation to the economic condition.

To sum up, tax risk in PIT in Poland is characterized by significant fluctuation. It is difficult to evaluate these findings, as no tolerance range has been defined in this case. The most desirable would be a systematic reduction of the net tax gap expressing the amount of unpaid taxes. Achieving this requires consistent identification and monitoring of tax risk, as well as implementation of a management strategy

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that responds to changing needs and macroeconomic conditions. An increase in tax arrears, reflecting difficulties in meeting tax obligations, may indicate a weakening economic environment, but it may also result from a flawed tax policy. This, in turn, may require preventive measures, also in terms of the shape of the tax system in general.

Local government subsector

Tax risk in the public finance sector is also shaped by the policy of local government authorities. This is supported by findings from the Supreme Audit Office (Najwyższa Izba Kontroli, 2014, 2021), which identified irregularities in (i) incorrect estimation of the risk level in the area of obtaining revenue, and (ii) ineffective enforcement of tax arrears or failure to comply with the requirements for granting relief in the repayment of tax liabilities. The reasons include the belief of the local government authorities regarding the discretion of granting relief in the repayment of liabilities (Najwyższa Izba Kontroli, 2014), but also the limited knowledge of tax law regulations, or unreliable preparation of draft tax resolutions and implementation of reporting obligations.

At the local level, tax risk understood as lost tax revenue can be analysed in the context of the financial consequences of local tax policy. This issue is most clearly reflected in tax preferences, of which there are more than seventy in the area of local taxes. However, not all reliefs and exemptions are considered tax preferences. The study assumes that legal provisions not formally classified as reliefs may constitute preferences, as they create more favourable conditions for taxpayers and are established by way of a administrative decision or resolution.

Tax preferences are therefore regarded as instruments that reduce tax burdens, while simultaneously lowering tax revenues. These include:

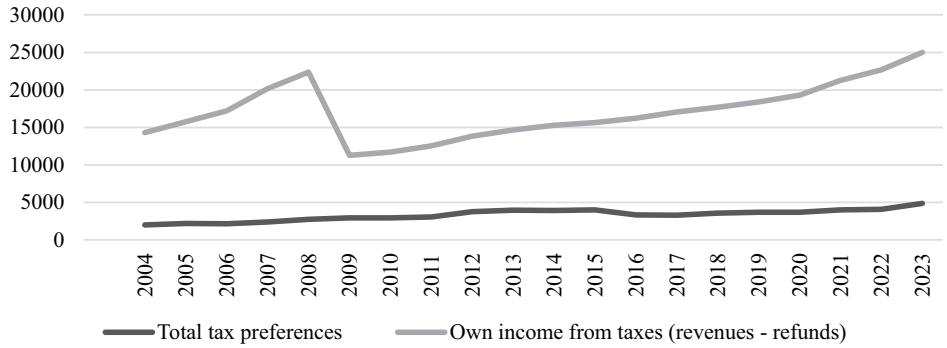
– reduction of tax rates (resolutions of municipal council);
– individual exemptions (resolutions of municipal council);
– reliefs in the repayment of tax liabilities (under the Tax Ordinance Act), e.g.: deferments of instalment plans and cancellation of arrears.

Municipal authorities manage revenue from local taxes, fees and property, as along with so-called supplementary revenue, which includes shares in PIT and CIT revenue and intra-sectoral transfers. This supplementary revenue is the main source of financing for municipal tasks. This situation is even less favourable because the budgetary consequences of the applied preferences are reflected in the reduced own revenue of municipalities from local taxes, reducing it by about 20% on average per year. Reducing the upper tax rates and applying reliefs and exemptions other than statutory ones reduce revenues from local taxes to the greatest extent. Table 2 in the Appendix presents detailed data on the financial consequences of the granted tax preferences.

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Tax risk is therefore influenced not only by arbitrary decisions within tax policy, but also by irregularities identified by the Supreme Audit Office. This and other premises justify the implementation of a tax risk management strategy at the level of local governments. A further argument for the need to monitor tax risk in the public finance sector is the fact that the amounts of tax preferences granted systematically increase regardless of the development of local tax revenue. Even during periods of considerable decline in revenue, the value of preferences granted remained largely unchanged (Figure 4).

Figure 4. Financial effects of tax preferences and municipal revenue from local taxes, 2004–2023 (PLN millions)



Source: own elaboration based on data from the Ministry of Finance (2003–2023).

The practice of applying preferences are undeniable due to their role in the system. Nonetheless, a thorough analysis of systemic solutions in this area may reveal the need for improvements. This is particularly important considering that the positive impact of fiscal decentralization on reducing regional development disparities is observed primarily when the system is characterized by high quality of public management (Kyriacou et al., 2015). Low quality public management prevents taxes from fulfilling their intended functions effectively. Adopting a clear concept of tax risk management could serve as an incentive to review existing systemic arrangements and replace them with new solutions better suited to current needs and conditions. Empirical evidence leaves no doubt that less affluent regions tend to apply local tax preferences more extensively. However, this does not translate into actual development. The preferences applied so far appear to be ad hoc measures for supporting economic entities and illusory in stimulating socio-economic development.

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Results

The research affords several significant conclusions.

- Public sector finances are characterised by tax risk, which helps maintain a façade of fiscal discipline understood as replacing public expenditure with tax expenditure.
- The importance of integrated management – encompassing both internal and external risks – is currently strongly emphasized, as tax risk stems from the actions of both parties involved in the tax relationship.
- Identifying and monitoring only unpaid tax amounts due to tax avoidance and evasion provides an incomplete picture of the tax risks faced by fiscal authorities.
- A holistic approach that includes non-compliance with tax regulations, tax errors, and the consequences of discretionary fiscal policy decisions offers a more accurate reflection of lost tax revenues.
- Discretionary decisions in tax policy have a varied impact on the scale of tax risk, when both the government and local government subsector are considered.
- For the optimal design of preventive measures aimed at effectively and efficiently minimizing tax risk, the implementation of a tax risk management framework is necessary at every level of public administration.

With regard to the government sector, the following conclusions can be drawn.

- The collection of PIT revenue involves greater uncertainty due to tax fraud, unlike at the local level, where tax risk tends to be more predictable.
- There is a particular need to improve compliance with tax law provisions, especially in the areas of taxpayer registration, timely filing of declarations, on-time payments and accurate reporting of tax bases.
- Tax risk affects the amounts transferred to the local government subsector as part of PIT revenue sharing, which justifies the need for consistent monitoring of this risk.

In the case of the local government sector, the following observation were made.

- The impact of discretionary tax policy on the tax risk of the local government subsector is greater than in the case of the central government subsector.
- Since local taxes represent the second largest source of funding for municipal tasks, effective tax risk management at the municipal level is crucial for preventing irregularities that affect revenue generation.
- The tax risk at the local government level shapes the amount of municipalities' own-source revenues, thus influencing the volume of transfer revenues received through the general subsidy.
- In municipal governments, efforts should be made to improve compliance with tax law provisions concerning the granting of tax reliefs and exemptions.

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In-depth research on tax risk, particularly the impact of discretionary decisions by tax authorities, requires access to data on the amounts of tax reliefs granted for the repayment of tax liabilities (government subsector) or the amounts of overdue tax liabilities (government and local government subsectors). At the municipal level, it is essential to measure and monitor tax risk related to taxes that constitute the primary sources of local revenue. One example is property tax, the second largest source of income for municipalities, in relation to which the tax gap is estimated in many countries, including the USA, Canada, Australia, and the UK.

Discussion

When interpreted broadly, tax risk refers to events that affect the level of tax revenue, determined by both taxpayer behaviour and the actions of the tax authority. From a narrow perspective, it is viewed solely through the lens of risk areas identified by authorities, typically associated with tax fraud and unintentional tax errors. In this view, tax risk is determined solely by the actions and/or negligence of the taxpayer. When treated holistically, tax risk encompasses not only non-compliance with tax law, but also the legally permitted use of tax preferences that lead to reductions in revenues. In the author's concept, this includes the financial consequences of systemic solutions operating within a given legal framework, within which decisions are made by the taxpayer and the tax authority (Klonowska, 2017).

Although taxpayers may be aware of the legal obligation to pay tax, they might deliberately decide not to comply (tax fraud) or make a choice that will result in unintentional error. The magnitude of tax risk is also influenced by the application of tax reliefs and exemptions (other than statutory), reductions in tax rates – both general and selective – as a form of tax incentive, as well as reliefs in the repayment of the tax liability. In all cases, resulting from the discretionary decisions of the authorities. The adoption of such a concept, results from the fact that in each case there is uncertainty as to the size of the financial consequences of the actions of both parties to the tax relationship.

The profounder insight into tax risk in the context of *noncompliance* and, more broadly, public liabilities management, is justified by many reasons. Government and local government finances, which make up two of the three components of the General Government sector, are not immune to disruptions in fiscal policy-making, the costs of which are ultimately borne by society and the economy. Responsibility for this lies with those who, as economic analysis shows, act quite rationally, but evidence of a lack of fiscal discipline is also an element of the puzzle, which should in principle ensure responsible financial management. Therefore, improved tax risk management at all levels of the General Government sector highlights the importance of financial resilience to unexpected shocks, countercyclical fiscal policy and political credibility.

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Although an objective assessment of the existence of tax risk characteristic of the tax system is not difficult, nevertheless, involvement in monitoring tax risk understood in the sense presented in this research is not practiced. While it is standard worldwide to estimate the tax gap not only in central taxes, but also in local taxes, non-tax liabilities and even in social insurance contributions. The findings of this research therefore emphasize the need to incorporate tax risk into Poland's established tax policy.

Conclusions

The multidimensionality of systemic and objective factors, as well as the changing socio-economic environment, determine the level of tax risk. Its identification and effective management are not easy. Despite the early implementation of proactive action, increasing data availability and improved data handling capabilities, improving management processes in this area is still very relevant and important. The need to monitor tax risk is justified on at least several counts, such as the need to assess the effectiveness of tax policy, assess progress in improving tax morale or closing the tax gap. Further, the use of tax gap analysis as a basis for strategic management of non-compliance risk is recommended by international organizations. In addition, transparent public policy will always be an indispensable element of a tax system that supports fair, sustainable and socially inclusive economic growth.

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Appendix

Table 1. Tax gap and personal income tax revenues in 2003–2022
(PLN millions)

Years	Personal income tax			Share %	
	Net tax gap	Gross tax gap	Revenues adjusted for overpayments/refunds		
	A	B	C	A/C	B/C
2003	5,962	9,412	27,570	22	34
2004	2,858	6,068	29,912	10	20
2005	3,885	7,285	35,237	11	21
2006	2,840	6,514	44,088	6	15
2007	6,843	10,136	51,489	13	20
2008	9,541	13,214	56,485	17	23
2009	8,018	12,243	52,251	15	23
2010	8,008	12,694	51,912	15	24
2011	13,133	18,354	56,769	23	32
2012	5,582	11,643	59,851	9	19
2013	4,901	11,684	63,198	8	18
2014	10,971	18,099	67,475	16	27
2015	6,679	14,149	72,282	9	20
2016	5,426	13,126	78,276	7	17
2017	6,905	14,902	85,811	8	17
2018	8,421	16,922	98,154	9	17
2019	2,908	11,609	107,770	3	11
2020	8,443	17,561	104,818	8	17
2021	5,826	14,876	120,361	5	12
2022	10,242	19,106	109,910	9	17

Source: own elaboration based on data from the Ministry of Finance and Central Statistical Office (https://www.gov.pl; https://stat.gov.pl).

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Table 2. Total financial impact of tax preferences granted by local tax authorities in 2003–2023 (PLN millions)

Years	Reduction of top tax rates	Reliefs and exemptions*	Cancellation of tax arrears	Payment by installments, deferment of payment deadline	Deductions	Total	Own income from taxes (revenues – refunds)	Share %
	A	B	C	D	E	F	G	F/G
2003	1 321	538	–	–	44	1,903	12,097	16
2004	1,355	583	–	–	53	1,991	14,297	14
2005	1,486	650	–	–	43	2,178	15,756	14
2006	1,505	344	205	99	23	2,175	17,230	13
2007	1,693	390	172	105	15	2,375	20,155	12
2008	2,062	441	156	79	10	2,748	22,358	12
2009	2,159	487	163	116	10	2,935	11,292	26
2010	1,997	511	150	280	11	2,949	11,717	25
2011	2,275	565	121	82	14	3,057	12,525	24
2012	2,914	601	130	94	19	3,757	13,832	27
2013	3,119	649	118	90	5	3,981	14,674	27
2014	3,060	666	119	86	11	3,941	15,303	26
2015	3,098	692	114	82	5	3,991	15,630	26
2016	2,562	591	103	74	8	3,338	16,252	21
2017	2,516	603	86	100	3	3,308	17,075	19
2018	2,776	615	87	78	3	3,558	17,694	20
2019	2,892	634	67	72	8	3,673	18,408	20
2020	2,752	700	131	91	2	3,677	19,289	19
2021	3,121	686	117	77	2	4,002	21,254	19
2022	3,257	654	85	91	3	4,089	22,688	18
2023	3,998	676	95	89	1	4,860	24,992	19

* Statutory reliefs and exemptions excluded. In 2003–2005, reliefs, deferrals, write-offs, exemptions and waivers of collection were counted as a total amount.

Source: own elaboration based on data from the Ministry of Finance (https://www.gov.pl).