

ARTICLE 33A OF THE VAT ACT - IMPROVED FINANCIAL LIQUIDITY FOR IMPORTERS IN POLAND AND THE RISK OF ABUSE

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Abstract: Article 33a of the Polish VAT Act is the Polish model of postponed VAT accounting, allowing import VAT to be settled in the VAT return instead of being paid at customs clearance. Using aggregated administrative data for 2020–2024 obtained from the Analytical Centre Department of the Tax Administration Chamber in Warsaw, the article examines the scale, commodity structure and concentration of imports accounted for under this mechanism. Descriptive analysis, commodity concentration measures and the Herfindahl-Hirschman Index (HHI) are used to identify changes and patterns that may be relevant to customs and tax risk profiling. The results show that Article 33a covered approximately one quarter of the value of Poland’s imports and was concentrated mainly in industrial, raw-material and technological goods. The findings indicate that aggregated customs data can support the initial identification of unusual trade patterns, although such patterns should be treated as risk signals rather than evidence of abuse.

Keywords: Article 33a of the Polish VAT Act, simplified import procedure, accounting in the tax return, foreign trade, CN 2841

JEL classification: F14, H25, K34

INTRODUCTION

Article 33a of the Polish VAT Act regulates the Polish model of postponed VAT accounting. It allows a VAT-registered taxable person to account for import VAT directly in the VAT return instead of paying it at customs clearance. This improves the importer’s financial liquidity, as it does not require funds to be

<https://doi.org/10.22630/MIBE.2026.27.3.11>



temporarily frozen. At the same time, however, the mechanism shifts a significant part of tax control to the stage of verification of tax returns.

Article 33a does not reduce the VAT liability itself, but changes the time and method of accounting for the tax. Consequently, the mechanism combines a significant liquidity benefit for compliant businesses with a shift from tax collection at customs clearance towards subsequent verification based on tax returns, customs declarations and risk analysis. In this article, imports accounted for under Article 33a are also referred to as imports under the simplified import procedure.

The literature identified for this study concerning Article 33a and comparable postponed VAT accounting mechanisms is predominantly legal, institutional and descriptive. To the author's knowledge, the reviewed literature does not provide a quantitative analysis of the scale, commodity structure and concentration of imports accounted for under Article 33a in Poland. One reason for this may be the limited public availability of sufficiently detailed administrative data. The dataset used in this study was obtained on an individual request from the Analytical Centre Department of the Tax Administration Chamber in Warsaw rather than from a generally available statistical database.

Against this background, the main aim of the study is to examine the scale, commodity structure and concentration of imports accounted for under Article 33a in Poland in 2020–2024 and to assess the usefulness of aggregated customs data for customs and tax risk profiling. The contribution of the study is therefore twofold. First, it provides a quantitative assessment of a mechanism that has so far been discussed mainly from a legal and institutional perspective. Second, it demonstrates how commodity-level and geographical concentration analysis may be used as an initial screening tool for identifying import flows requiring more detailed examination. The study does not seek to identify individual cases of fraud or to estimate the VAT gap.

LITERATURE REVIEW

The literature devoted directly to Article 33a of the VAT Act is limited. The most important study is the article by Krychowski [2023], which provides a concise description of the simplification applicable to the importation of goods, the general rules governing the tax liability, the obligation to pay VAT on imports under Article 33, and the conditions for using Article 33a. The author emphasises the liquidity function of the mechanism, while also pointing out that its application depends on the fulfilment of specific statutory conditions [Krychowski 2023].

In the Polish literature, the subject appears more frequently in commentaries on the VAT Act. Article 33a is discussed, among others, by Bartosiewicz [2026], Michalik [2024] and Matarewicz [2023]. These commentaries present Article 33a as a special method of accounting for tax due on imports, analysed together with Articles 33, 86 and 99 of the VAT Act. The common conclusion of this literature is that the provision has a liquidity and technical function, but its application is

conditional on formal requirements and the correct reporting of the tax in the tax return/JPK file.

A general tax-law perspective is provided in the publications by Mastalski [2021] and Smoleń and Wójtowicz [2021]. These authors do not focus on Article 33a itself, but explain the structure of value added tax, the importation of goods as a taxable transaction, and the relationship between import VAT and the destination principle. Krychowski [2023] adds that the importation of goods is a factual event giving rise to tax liability even where customs duty is suspended, reduced or does not arise.

For the customs-law dimension, the commentary on customs law by Laszuk, Komorowski and Michalski [2022] is relevant. It is useful in explaining customs representation, which under Article 33a serves as an organisational and safeguarding condition. The customs literature also makes it possible to link Article 33a with the Union Customs Code, in particular release for free circulation, simplified declarations, entry in the declarant's records and AEO status.

In the English-language literature, the Polish Article 33a may be compared with solutions referred to as postponed VAT accounting, deferred import VAT accounting or an import VAT reverse charge. These terms are not completely uniform or identical, because individual countries define the conditions for access to the declaration-based accounting of import VAT differently. Nevertheless, the economic effect is common: the taxable person does not pay VAT at customs clearance, but reports output tax and, if the relevant conditions are met, input tax in the VAT return.

In the United Kingdom guidance issued by HMRC (His Majesty's Revenue and Customs), postponed VAT accounting is described directly as a method that allows import VAT to be declared and recovered in the same return, rather than paid in advance on importation and recovered later. The guidance also states that the taxable person must be VAT-registered and that, where goods are imported on behalf of the taxable person, it is important to indicate this method correctly in the import declaration [HMRC 2025].

A similar approach is visible in OECD documents. In the International VAT/GST Guidelines, the organisation presents VAT as a tax of particular importance in the context of growing international trade and points to the need to coordinate VAT rules in cross-border transactions in order to limit the risk of double taxation or unintended non-taxation. Although the OECD Guidelines focus mainly on services and intangibles, their starting point—taxation in the jurisdiction of consumption—also justifies the taxation of imported goods while maintaining neutrality for taxable persons engaged in economic activity [OECD 2017].

Where the tax is not physically collected at the border, tax-return data, ex post control and risk profiling become more important. Alexopoulos et al. show that analysis of VAT transaction networks and machine-learning methods can support the identification of tax risks, and that their approach may be implemented after taxable persons have submitted their returns. Although their study does not deal

directly with imports, it provides a sound methodological justification for analysing large volumes of customs and tax data, commodity concentration and unusual changes in the value of imports under the Article 33a mechanism [Alexopoulos et al. 2025].

The control and risk dimension is developed in the work of Keen and Smith [2007], who describe VAT as an efficient tax that is nevertheless vulnerable to abuse where cross-border settlements, deduction rights and tax refunds are involved. Although their study does not directly concern Article 33a, it supports the approach adopted in this article: analysis of large data sets, commodity concentration, changes in value and unusual import profiles.

Studies concerning the analysis of customs data are also relevant from a similar perspective. Park, Kim and Cha [2022] analyse the possibilities of risk analysis in detecting customs-law irregularities on the basis of import declarations, indicating that knowledge of changing trade flows is important for risk management. Mai et al. [2021], in turn, emphasise the variability over time of certain trade patterns and, consequently, of fraud, which requires an analytical approach to the subsequent selection of declarations for inspection. These studies do not deal directly with VAT or import facilitations, but demonstrate the need for data analysis as part of post-clearance controls aimed at combating potential customs fraud [Park, Kim, Cha 2022; Mai et al. 2021].

Since quantitative analyses depend on the adequate quality of statistical data, attention should also be paid to the reliability of international trade data. Markowicz and Baran [2021] examine the quality of intra-Community trade data for selected CN commodity groups.

The literature review therefore shows that direct studies of Article 33a are scarce and are predominantly legal or descriptive, while quantitative studies of tax and customs risk focus mainly on broader problems of VAT fraud, customs irregularities and data-based risk detection. The present study connects these two strands of literature by applying quantitative analysis to the Polish postponed VAT accounting mechanism itself. In this sense, Article 33a is considered not only as a liquidity facilitation for businesses, but also as an area in which customs and tax data may be used for ex post risk profiling.

LEGAL FRAMEWORK OF ARTICLE 33A OF THE VAT ACT

The direct legal basis for Article 33a is Article 211 of Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax. This provision leaves Member States free to determine the detailed rules for the payment of VAT on importation and, at the same time, allows them to permit a solution under which VAT due on importation is not paid at the time of importation, provided that it is declared as due in the VAT return. The Polish Article 33a therefore falls within the model provided for by the Directive and does not constitute an exception or an

autonomous derogation from the common EU VAT system [Directive 2006/112/EC].

Article 33a of the VAT Act should be regarded as a special method of accounting for the tax due on the importation of goods, rather than as a tax exemption. The provision allows a VAT-registered taxable person to report import VAT due in the tax return for the period in which the tax liability on the importation arose. In the literature and international practice, this mechanism is referred to as postponed VAT accounting, i.e. accounting for import VAT in the tax return instead of paying it at customs clearance [VAT Act, Article 33a(1); Bartosiewicz 2026].

Access to Article 33a is subject to statutory conditions intended to ensure a minimum level of taxpayer reliability. These include VAT registration, compliance with tax and social-security obligations and, as a rule, the lodging of customs declarations through a direct or indirect representative, subject to exceptions provided for authorised operators and holders of specified customs simplifications [VAT Act, Article 33a; Regulation No 952/2013].

The relationship between Article 33a and the right of deduction is particularly important. Article 86(2)(2)(b) of the VAT Act explicitly provides that, in the case of the importation of goods, input tax also includes the amount of tax due in the case referred to in Article 33a. As a result, for a compliant taxable person using imported goods for taxable activities, the mechanism is generally economically neutral while being highly significant for liquidity [VAT Act, Article 86(1) and Article 86(2)(2)(b)].

Taxable persons importing goods under Article 33a are required to submit monthly tax returns. The legislature therefore compensates for the shift of collection from the border to the tax return by requiring more frequent reporting and, consequently, facilitating subsequent verification [VAT Act, Article 99(3a)(3), (3d) and (4a)].

The mechanism for accounting for the tax due on the importation of goods in the tax return was introduced into the VAT Act on 1 December 2008 by the Act of 7 November 2008, which added Articles 33a-33c after Article 33. Initially, this possibility was linked to specific simplified procedures under customs law [VAT Amendment Act 2008].

A significant liberalisation of Article 33a took effect on 1 July 2020. Pursuant to Article 33(2) of the Act of 31 July 2019 amending certain acts in order to reduce regulatory burdens, the previous link between declaration-based accounting for import VAT and the placing of goods under a specified simplified procedure was replaced by a rule under which the mechanism may be used by a VAT-registered taxable person. At the same time, the legislature introduced a requirement that customs declarations be lodged by a direct or indirect representative, with an exception for taxable persons holding AEO status or authorisations for the customs simplifications referred to in Articles 166 or 182 of the UCC. The possibility of using Article 33a solely in conjunction with a simplified procedure under customs law was therefore abandoned (before the amendment, goods had to be covered in Poland by

a simplification under Article 166 or 182 of the UCC), and the focus shifted to enabling VAT taxpayers to use Article 33a [Act Amending Certain Acts 2019].

METHODOLOGY AND ANALYTICAL ASSUMPTIONS

The study is based on aggregated administrative data concerning imports accounted for under Article 33a of the VAT Act. The data were obtained on request from the Analytical Centre Department of the Tax Administration Chamber in Warsaw (Wydział Centrum Analityczne Izby Administracji Skarbowej w Warszawie), which processes and provides international trade data. The dataset covers the years 2020–2024 and includes import values, the number of entities and customs declarations, commodity codes, mass and geographical information concerning countries of dispatch and origin.

The starting year was selected primarily because a significant liberalisation of Article 33a entered into force on 1 July 2020, substantially broadening access to declaration-based accounting for import VAT. The year 2020 should therefore be regarded as a transition year in the development of the current model. The end of the period, 2024, was the latest complete calendar year available when the dataset was obtained. The five-year period also covers substantial changes in international trade conditions associated with the COVID-19 pandemic, disruptions in global supply chains and the war in Ukraine.

Commodity analysis was conducted at the four-digit Combined Nomenclature level (CN4). The level of aggregation was selected during the data-acquisition process as a compromise between commodity detail and coverage of the entire population of Article 33a imports over the five-year period. Within the scope of the present data-acquisition process, obtaining a complete CN8 dataset for all commodity groups over the five-year period was not practicable; a more detailed extraction would have required prior narrowing of the request to selected commodity groups. Such an approach would reduce the exploratory character of the study by requiring the relevant goods to be selected before the analysis. CN4 therefore makes it possible to analyse the full commodity structure and identify groups that may subsequently justify analysis at CN8/TARIC level.

The analysis combines descriptive statistics, year-on-year changes, comparison with Poland's total imports, commodity concentration analysis and a Pareto-type assessment of the distribution of import value across CN4 headings. For the selected case of CN 2841, geographical concentration was additionally assessed using the Herfindahl-Hirschman Index (HHI). HHI was selected because it provides a simple synthetic measure of concentration and gives greater weight to dominant geographical directions through the squaring of individual shares. In this study, HHI is used as a screening measure rather than as evidence of irregularity.

The study is subject to important data limitations. The dataset is aggregated and does not permit the identification or analysis of individual importers, their compliance histories or links between specific customs declarations and individual

VAT/JPK settlements. Similarly, CN4 data do not distinguish individual products within each four-digit heading. Consequently, changes in import value, unit value or geographical concentration identified in this study should be interpreted as signals that may justify further analysis, not as evidence of fraud or tax abuse. More detailed risk assessment would require access to CN8/TARIC and transaction- or taxpayer-level data, which were not available for the present study.

Since VAT is generally neutral for compliant taxable persons, the main reference point for assessing the economic scale of Article 33a is the total value of Poland's imports rather than State-budget VAT revenue. Any VAT-equivalent calculations presented later in the article are therefore illustrative measures of scale and should not be interpreted as estimates of the VAT gap or potential revenue loss.

SCALE AND DYNAMICS OF IMPORTS UNDER ARTICLE 33A IN 2020-2024

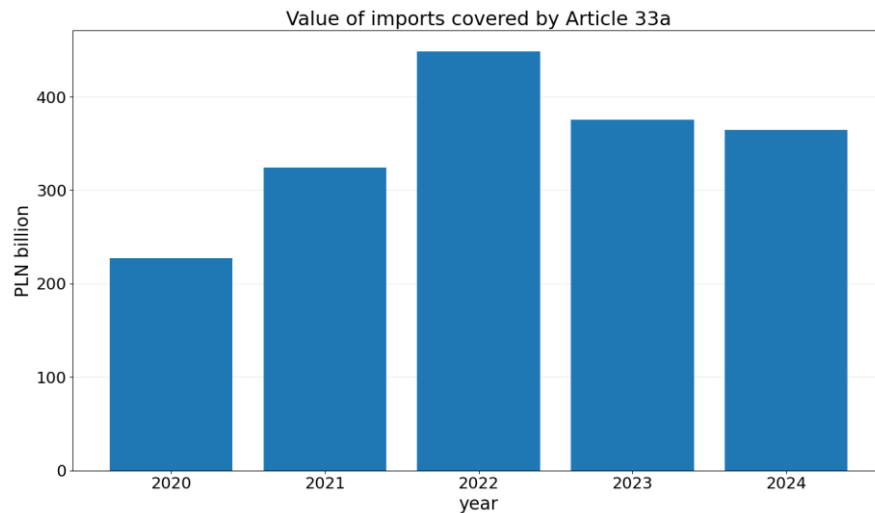
The value of imports covered by the analysed data on the Article 33a mechanism increased from approximately PLN 227.1 billion in 2020 to approximately PLN 448.4 billion in 2022, and subsequently decreased to approximately PLN 364.4 billion in 2024. The decline in value after 2022 does not, however, mean that taxable persons were withdrawing from the mechanism. The number of companies increased from 6,999 to 9,186, while the number of declarations under the simplified import procedure reached its highest level in the series in 2024.

Table 1. Scale and dynamics of imports using Article 33a in 2020-2024

Year	Value (PLN billion)	Value growth y/y	Number of companies	Growth in number of companies y/y	Number of declarations	Growth in number of declarations y/y
2020	227.1	—	6,999	—	905,391	—
2021	323.9	42.6%	7,629	9.0%	1,095,954	21.0%
2022	448.4	38.4%	8,285	8.6%	986,079	-10.0%
2023	375.6	-16.2%	8,702	5.0%	961,639	-2.5%
2024	364.4	-3.0%	9,186	5.6%	1,142,316	18.8%

Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Figure 1. Value of imports covered by Article 33a in 2020-2024



Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Two main conclusions may be drawn. First, the value of imports under the Article 33a mechanism reached its maximum in 2022, which may be linked both to raw-material prices and supply-chain disruptions, as well as to the fuller use of the simplified import mechanism following its liberalisation in 2020. Second, the steadily increasing number of companies suggests that the mechanism is becoming more widespread, which means that the Article 33a mechanism is not a marginal phenomenon, but a permanent and growing element of import practice.

ARTICLE 33A OF THE VAT ACT AGAINST POLAND'S TOTAL IMPORTS

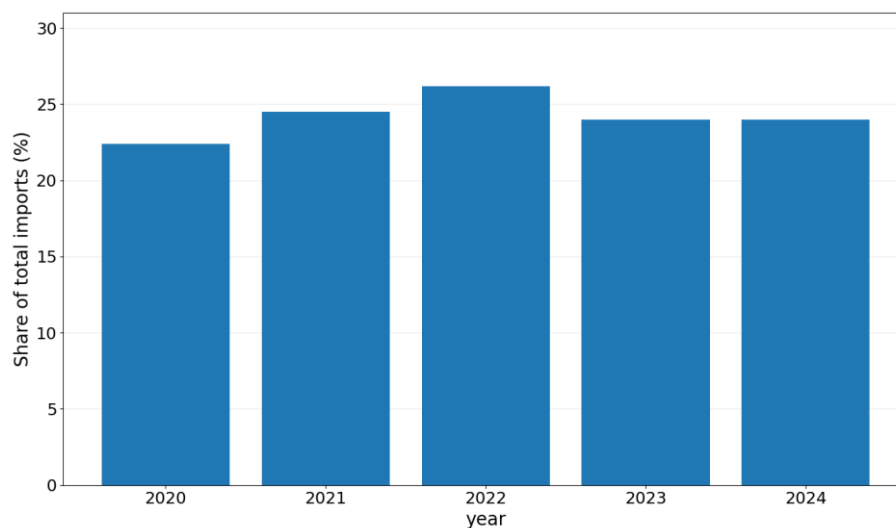
The most appropriate comparison is between the value of imports under the Article 33a mechanism and Poland's total imports. Statistics Poland data were used, according to which Poland's imports at current prices amounted to PLN 1,521.0 billion in 2024, while imports under Article 33a accounted for 24.0% (Table 2). On this basis, Article 33a accounted for approximately 22-26% of the value of Poland's imports during the period under review [GUS 2025; GUS 2020-2023].

Table 2. Article 33a against Poland's total imports in 2020-2024

Year	Poland's total imports (PLN billion)	Imports under Article 33a (PLN billion)	Share of imports under Article 33a in total imports
2020	1,015.4	227.1	22.4%
2021	1,323.0	323.9	24.5%
2022	1,711.8	448.4	26.2%
2023	1,568.3	375.6	24.0%
2024	1,521.0	364.4	24.0%

Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw and Statistics Poland data

Figure 2. Share of imports under Article 33a in the total value of Poland's imports



Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw and Statistics Poland data

The size of the share (Figure 2) illustrates the scale of use of the simplified procedure: the mechanism covers approximately one quarter of the value of Poland's imports. From the perspective of the customs and tax authorities, this means that even though VAT is neutral for a compliant taxable person, the Article 33a mechanism generates a considerable analytical burden. It is necessary to verify not only compliance with the formal conditions, but also the commodity structure, unit values, country of dispatch, country of origin and regularity of the entities' activity—in other words, everything that may raise doubts given the scale of these imports.

COMMODITY STRUCTURE AND CONCENTRATION OF THE VALUE OF IMPORTS UNDER ARTICLE 33A OF THE VAT ACT

The commodity structure of imports under Article 33a was analysed at CN4 level, in accordance with the methodological assumptions described above. The individual CN4 headings were additionally assigned to broader commodity groups corresponding to CN chapters in order to provide a synthetic representation of the import structure.

The dataset contains 1,179 distinct CN4 codes (commodity groups). The top 20% of codes, i.e. 236 items ranked by import value, account for 90.4% of the total value of imports under the simplified import procedure in 2020-2024. This indicates a very strong concentration effect: most of the value generated by the mechanism is attributable to a relatively narrow range of goods.

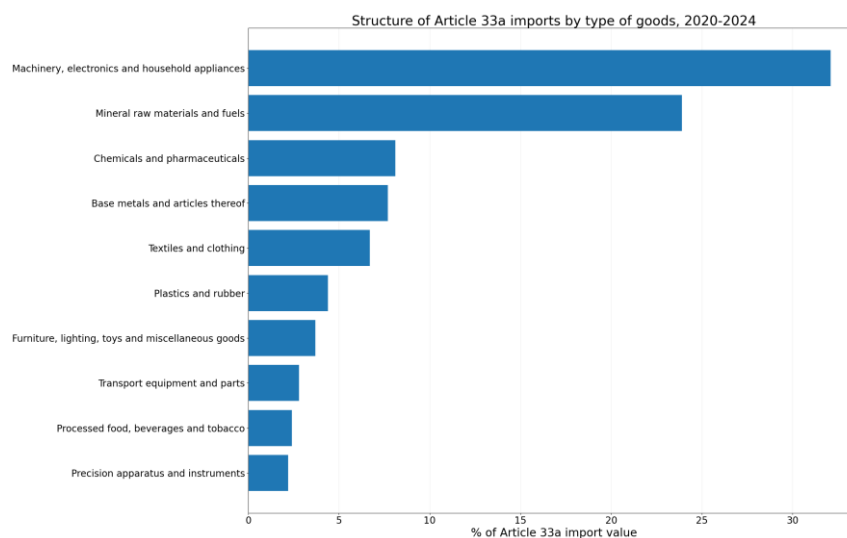
Table 3. Commodity structure and concentration of Article 33a import value by commodity group, 2020-2024

Commodity group	Value 2020-2024 (PLN billion)	Share of imports under Article 33a	Number of CN4 commodity groups	Value in top 20% of CN4	Share of top 20% in total Article 33a imports	CN4 codes in top 20%	Group coverage by top 20%
Machinery, electronics and household appliances	558.6	32.1%	134	540.8	31.1%	61	96.8%
Mineral raw materials and fuels	415.2	23.9%	60	407.7	23.4%	8	98.2%
Chemicals and pharmaceuticals	140.2	8.1%	177	114.2	6.6%	24	81.4%
Base metals and articles thereof	134.3	7.7%	146	110.5	6.4%	33	82.3%
Textiles and clothing	116.7	6.7%	143	94.2	5.4%	27	80.7%
Plastics and rubber	76.6	4.4%	43	70.7	4.1%	20	92.3%

Commodity group	Value 2020-2024 (PLN billion)	Share of imports under Article 33a	Number of CN4 commodity groups	Value in top 20% of CN4	Share of top 20% in total Article 33a imports	CN4 codes in top 20%	Group coverage by top 20%
Furniture, lighting, toys and miscellaneous goods	63.5	3.7%	35	58.9	3.4%	9	92.8%
Transport equipment and parts	47.9	2.8%	39	40.6	2.3%	7	84.9%
Processed food, beverages and tobacco	42.1	2.4%	52	35.9	2.1%	8	85.3%
Precision apparatus and instruments	38.1	2.2%	55	30.4	1.8%	9	80.0%

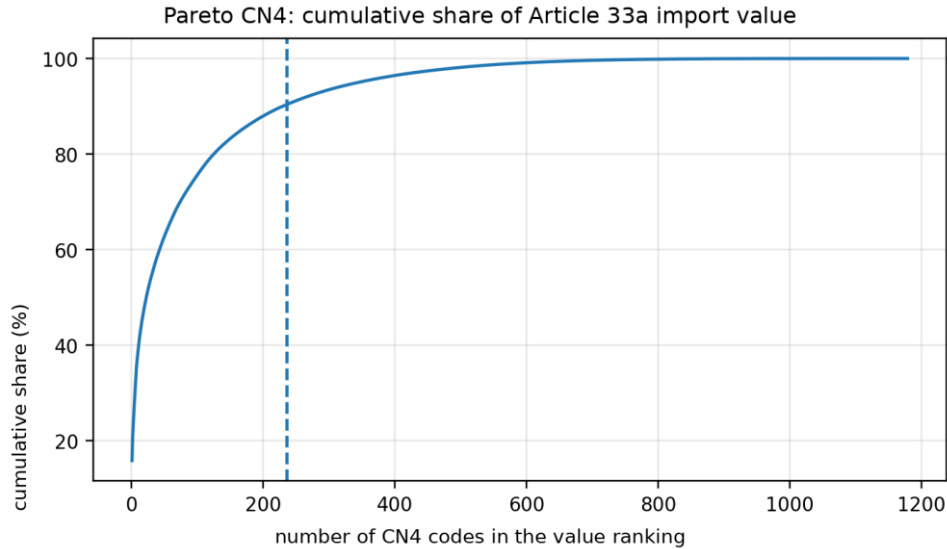
Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Figure 3. Structure of import value under Article 33a by type of goods, 2020-2024



Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Figure 4. Pareto distribution of CN4 codes: cumulative share of Article 33a import value



Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

The result is fairly unambiguous. The largest commodity group imported into Poland under the Article 33a mechanism is not food, but machinery, electronics and household appliances, which account for approximately 32.1% of the value of imports under Article 33a. The second group is mineral raw materials and fuels (23.9%). Processed food, beverages and tobacco are of much less importance (approximately 2.4%), while vegetable and animal products together do not exceed 1% of the value. In practice, Article 33a is therefore particularly important for importers of electronics, machinery, fuels, chemicals, metals, textiles and industrial parts.

This is also confirmed by individual CN4 codes. CN 2709, i.e. crude petroleum oils, represented the highest import value during the period and accounted for 15.9% of all simplified imports. It was followed at a considerable distance by CN 8471, i.e. automatic data-processing machines, with 5% of the total, and CN 2710, i.e. petroleum products, with 2.9%. This demonstrates the clearly industrial, raw-material-based and technological structure of imports under the Article 33a mechanism.

Table 4. CN4 headings with the highest value of imports covered by Article 33a, 2020-2024

CN4	Short description	Group	Value (PLN billion)	Share	Cumulative share
2709	Petroleum oils and oils obtained from bituminous minerals, crude	Mineral raw materials and fuels	276.3	15.9%	15.9%
8471	Automatic data-processing machines and units thereof; magnetic or optical readers; machines for transcribing...	Machinery, electronics and household appliances	86.8	5.0%	20.9%
2710	Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations...	Mineral raw materials and fuels	49.8	2.9%	23.7%
2701	Coal; briquettes, ovoids and similar solid fuels manufactured from coal	Mineral raw materials and fuels	48.0	2.8%	26.5%
8517	Telephone sets and other apparatus for the transmission or reception of voice, images or other data...	Machinery, electronics and household appliances	44.1	2.5%	29.0%
8529	Parts suitable for use solely or principally with the apparatus of headings 8524 to 8528	Machinery, electronics and household appliances	41.6	2.4%	31.4%
8507	Electric accumulators, including separators therefor, whether or not rectangular	Machinery, electronics and household appliances	39.6	2.3%	33.7%
2841	Salts of oxometallic or peroxometallic acids	Chemicals and pharmaceuticals	38.2	2.2%	35.9%

CN4	Short description	Group	Value (PLN billion)	Share	Cumulative share
8708	Parts and accessories of the motor vehicles of headings 8701 to 8705	Transport equipment and parts	24.7	1.4%	37.3%
8528	Monitors and projectors; reception apparatus for television...	Machinery, electronics and household appliances	23.1	1.3%	38.7%
8524	Flat panel display modules, whether or not incorporating touch-sensitive screens	Machinery, electronics and household appliances	22.4	1.3%	39.9%
2304	Oilcake and other solid residues, whether or not ground or in pellets, resulting from the extraction...	Processed food, beverages and tobacco	20.6	1.2%	41.1%
8544	Insulated wire, cable and other insulated electric conductors; optical-fibre cables...	Machinery, electronics and household appliances	19.3	1.1%	42.2%
8411	Turbo-jets, turbo-propellers and other gas turbines	Machinery, electronics and household appliances	16.9	1.0%	43.2%
8504	Electrical transformers, static converters (e.g. rectifiers) and inductors	Machinery, electronics and household appliances	16.8	1.0%	44.2%

Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

SELECTED CASE: CN 2841 - SALTS OF OXOMETALLIC OR PEROXOMETALLIC ACIDS

CN code 2841 was selected from the broader CN4 dataset as an illustrative case for more detailed analysis because it combines three characteristics relevant to risk profiling: a sudden increase in import value, a high unit value and strong

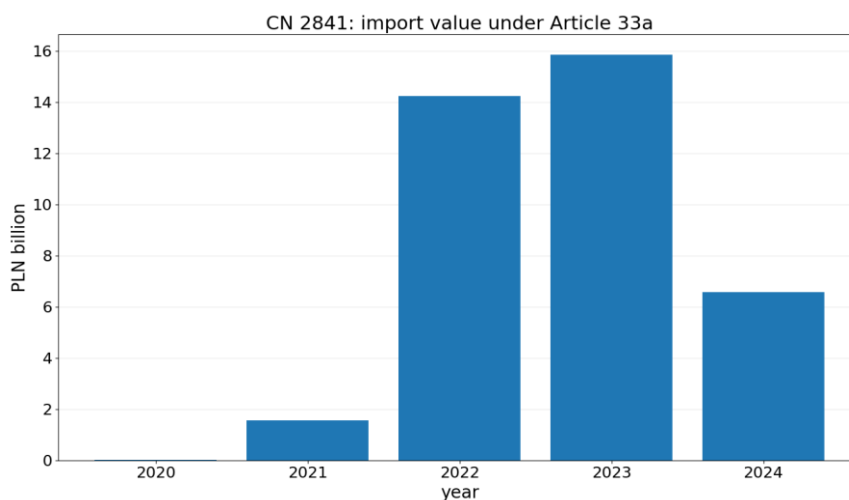
geographical concentration. In 2020, imports under this heading using Article 33a were marginal, amounting to approximately PLN 16 million, but in 2022–2023 they reached several billion zlotys per year, including almost PLN 16 billion in 2023.

Table 5. CN 2841 under Article 33a - value, mass, unit value and illustrative VAT equivalent

Year	CN 2841 value (PLN billion)	Mass (thousand tonnes)	Unit value (PLN/kg)	Share in the Article 33a procedure	Share in Poland's imports	Illustrative VAT equivalent at 23% (PLN billion)	CN 2841 value growth y/y
2020	0.02	1.87	8.62	0.01%	0.00%	0.00	—
2021	1.56	18.41	84.82	0.48%	0.12%	0.36	9,590.8%
2022	14.24	74.56	191.04	3.18%	0.83%	3.28	812.3%
2023	15.85	76.84	206.30	4.22%	1.01%	3.65	11.3%
2024	6.57	55.96	117.36	1.80%	0.43%	1.51	-58.6%

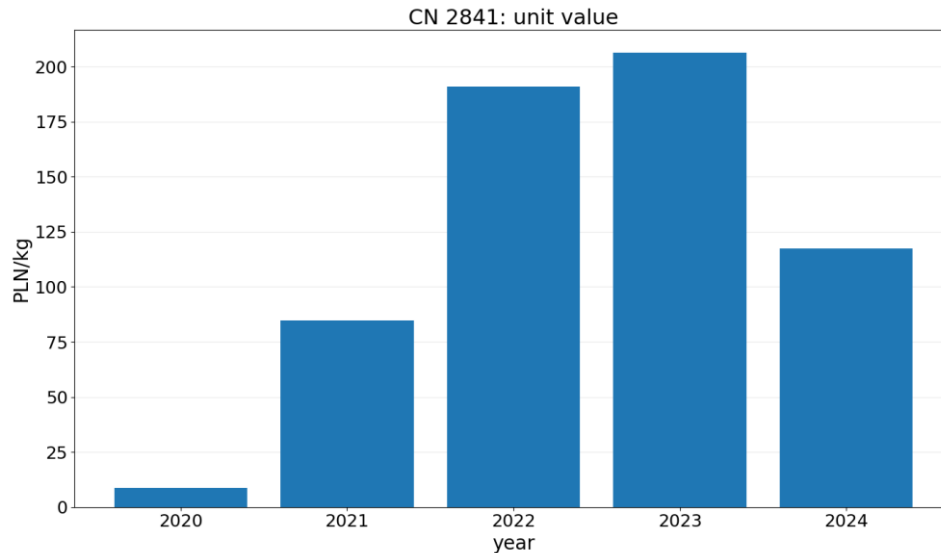
Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Figure 5. CN 2841: import value under Article 33a (PLN billion), 2020-2024



Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Figure 6. CN 2841: unit value (PLN/kg), 2020-2024



Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

The most likely hypothesis concerning the sharp increase in the value of imports under CN code 2841 is linked to the development of the lithium-ion battery supply chain in Poland and Europe. CN heading 2841 includes, among other products, salts of oxometallic and peroxometallic acids, while at CN/TARIC level 28419040 lithium nickel manganese cobalt oxides are distinguished, including, for example, NMC/NCM cathode powders used in lithium-ion batteries [TariffNumber 2026].

This conclusion is consistent with the development of the battery sector in Poland. The LG Energy Solution Wrocław plant began production in 2017 and, according to a Reuters overview, its target production capacity was expected to reach 115 GWh by 2025, which may indicate an increase in production during the period under discussion [Reuters 2024]. At the same time, the European Investment Bank announced in 2020 that it was financing the expansion of LG Chem's battery production in Poland, and in 2022 the European Commission approved Polish State aid for the expansion of the LG Chem/LG Energy Solution electric-vehicle battery plant near Wrocław [European Investment Bank 2020; European Commission 2022].

During the same period, Umicore was developing the European cathode-material supply chain in Nysa and subsequently, together with PowerCo/Volkswagen, announced the Ionway project concerning the production of cathode materials in Poland [Umicore 2023; Ionway 2023].

The increase in the value of imports of goods under CN 2841 may therefore reflect a genuine economic change and, consequently, imports of cathode materials or specialised metal compounds required for battery production. This does not therefore indicate abuse; aggregated CN4-level data instead point to a profile requiring in-depth analysis. They thus provide a useful starting point for developing a post-clearance control profile.

HHI AS A SIMPLE MEASURE OF THE CONCENTRATION OF CN 2841 IMPORT VALUE

The Herfindahl-Hirschman Index (HHI) was used to assess the geographical concentration of imports of goods under CN 2841. In its conventional application, the HHI measures market concentration and is calculated as the sum of the squared shares of individual market participants [Czarny, Rapacki 2002]. In this study, the same method was applied not to company shares, but to the shares of countries of dispatch or countries of origin in the import value of CN 2841. The index was calculated using the following formula:

$$HHI = \sum_{i=1}^n s_i^2,$$

where: s_i - the share of the i -th country in the import value of the commodity heading under examination.

If the shares are expressed as decimal fractions, the HHI takes values ranging from close to 0 to 1. A value close to 1 indicates extreme concentration, i.e. the dominance of a single geographical direction, while lower values indicate greater dispersion of imports among many countries. Alternatively, shares may be expressed in percentage points, in which case the HHI ranges from 0 to 10,000 [Dynowska, Kes 2016]. This study uses the fractional variant, i.e. a range from 0 to 1.

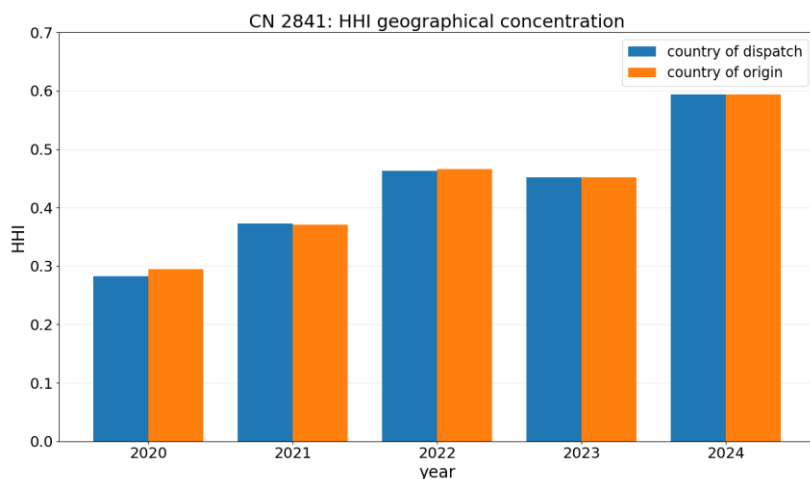
High concentration may result from lawful and economically rational factors, such as supplier specialisation, the location of cathode-material producers or the organisation of the supply chain. The index should therefore be treated not as evidence of abuse, but as a tool for selecting areas requiring in-depth analysis. Its use in the case examined is additionally justified because CN 2841 is characterised by a high unit value and a sharp increase in import value in 2021-2023. Where such an increase is also strongly geographically concentrated, the customs and tax administration should consider moving to the operational-data level of CN8/TARIC codes, customs value, transport documents, links between the parties and the subsequent use of the goods in production in order to conduct more precise risk profiling for post-clearance import controls.

Table 6. Geographical concentration of imports of CN 2841 goods according to the HHI

Year	HHI - country of dispatch	Top 3 dispatch countries	HHI - country of origin	Top 3 origin countries
2020	0.283	83.2%	0.295	83.0%
2021	0.373	99.3%	0.371	99.3%
2022	0.463	99.9%	0.466	99.9%
2023	0.452	99.9%	0.452	99.9%
2024	0.594	99.9%	0.594	99.9%

Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Figure 7. CN 2841: geographical concentration according to the HHI



Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

Table 7. Main countries of dispatch - CN 2841 in 2020-2024

Country of dispatch for CN 2841	Import value 2020-2024 (PLN billion)	Share
Republic of Korea	24.32	63.6%
Japan	7.28	19.0%
China	6.58	17.2%
India	0.03	0.1%
South Africa	0.01	0.0%

Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

The HHI values show that after 2020 CN 2841 was very strongly concentrated geographically. In 2021-2024, the share of the three main directions generally exceeded 99%. The data therefore do not concern small, dispersed trade, but a specialised flow linked to a specific supply chain.

ILLUSTRATIVE VAT EQUIVALENT UNDER THE GENERAL IMPORT-ACCOUNTING RULES AND ITS RELATIVE SCALE

Only after presenting the value of imports under Article 33a against Poland's total imports can the analysed mechanism be cautiously related to the VAT dimension. Table 8 does not present the actual amount of "import VAT" or actual budget revenue associated with the application of Article 33a. In order to illustrate the financial scale of the analysed flows, an illustrative VAT equivalent under the general import-accounting rules was nevertheless calculated by applying, for illustrative purposes, a rate of 23% to the value of imports covered by Article 33a of the VAT Act.

The value calculated in this manner should not, however, be equated with the amount of tax that would actually have been paid into the budget if the Article 33a mechanism had not been applied, because the actual taxable amount for VAT on importation need not be identical to the import value used in this estimate. Furthermore, individual goods may be subject to different tax rates. Another important aspect must also be taken into account: abandoning accounting under Article 33a could affect the direction of trade flows, including by causing import customs clearance to be carried out in other EU Member States.

Table 8. Illustrative VAT equivalent under the general import-accounting rules and its relative-scale indicator

Year	Imports under Article 33a (PLN billion)	Illustrative VAT equivalent under the general import-accounting rules - 23% (PLN billion)	State-budget VAT revenue (PLN billion)	Relative-scale indicator for the illustrative VAT equivalent
2020	227.1	52.2	184.5	28.3%
2021	323.9	74.5	215.7	34.5%
2022	448.4	103.1	230.5	44.7%
2023	375.6	86.4	244.3	35.4%
2024	364.4	83.8	287.7	29.1%

Source: own calculations based on data from the Analytical Centre Department of the Tax Administration Chamber in Warsaw

The comparison of the estimated amount with total State-budget VAT revenue is therefore purely illustrative. On this basis, a relative-scale indicator for the illustrative VAT equivalent was calculated, showing the relationship between the

illustrative VAT equivalent corresponding to the value of imports covered by the simplified import procedure and annual State-budget VAT revenue. This indicator is not a measure of the tax gap, potential revenue loss or the actual risk of revenue loss; it serves solely to illustrate the scale of the tax value associated with flows covered by the Article 33a mechanism against the background of the entire VAT revenue system [Ministry of Finance 2020-2024].

In 2022, the illustrative VAT equivalent calculated by applying a 23% rate to the value of imports accounted for under Article 33a amounted to approximately PLN 103.1 billion, equivalent to 44.7% of State-budget VAT revenue in that year. As explained above, this ratio does not represent VAT generated by Article 33a, potential budget revenue or a VAT-gap estimate. It serves only to illustrate the financial scale of import flows subject to declaration-based accounting and, consequently, the potential importance of effective ex post risk profiling.

DISCUSSION AND CONCLUSIONS

The results show that Article 33a was a significant component of Polish import practice in 2020–2024 following the liberalisation of the mechanism in 2020. Its importance should be assessed not only from the perspective of liquidity facilitation for businesses but also from the perspective of customs and tax administration. A mechanism covering approximately one quarter of the value of Polish imports transfers a substantial volume of transactions from immediate collection of import VAT towards declaration-based accounting and subsequent verification.

The findings support the broader literature emphasising the increasing importance of data-based approaches to tax and customs risk management. Alexopoulos et al. [2025] demonstrate the usefulness of transaction and network data in VAT-risk detection, while Park, Kim and Cha [2022] and Mai et al. [2021] show the relevance of changing trade patterns for customs-risk analysis. The present study complements this literature by showing how relatively simple measures applied to aggregated Article 33a data—changes in import value, commodity concentration, unit values and geographical concentration—may serve as an initial screening layer before more detailed operational analysis.

The CN 2841 case illustrates both the usefulness and the limits of this approach. A rapid increase in value combined with high unit values and strong geographical concentration may justify further examination, but it does not constitute evidence of abuse. In this case, developments in the European lithium-ion battery supply chain provide an economically plausible explanation for the observed trade pattern. Risk profiling should therefore be understood as a mechanism for selecting areas for further verification rather than as a method for automatically classifying unusual trade flows as fraudulent.

From the perspective of tax administration, the results suggest that monitoring Article 33a should combine changes in commodity flows with information on unit

values, countries of dispatch and origin and geographical concentration. Where significant deviations are identified, analysis may subsequently move from aggregated CN4 data to CN8/TARIC codes and, where legally and technically available, to transaction-level customs data, VAT/JPK information and taxpayer compliance history. Such a multi-stage approach may also reduce the risk that static profiles become ineffective when trade patterns or commodity classifications change over time.

The study has several limitations. The data are aggregated and therefore do not allow individual importers to be identified, nor do they permit direct links to be established between customs declarations and the VAT settlements of individual taxpayers. The CN4 level also does not identify specific products within individual headings. For these reasons, the study cannot estimate the scale of actual abuse or the VAT gap associated with Article 33a.

Future research could extend the analysis using CN8/TARIC and transaction-level data for commodity groups identified through initial screening, as well as by linking customs and tax data where access conditions permit. Comparative analysis of postponed VAT accounting in other EU Member States would also help assess whether the patterns observed in Poland are specific to Article 33a or reflect broader characteristics of declaration-based import VAT accounting.

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