

Financial Law Review

No. 37 (1)/2025

UNIVERSITY OF GDAŃSK • MASARYK UNIVERSITY • PAVEL JOZEF ŠAFÁRIK UNIVERSITY
<http://www.ejournals.eu/FLR>

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MODERNIZATION OF SUPERVISION OVER THE COLLECTION OF VALUE-ADDED TAX ON B2C TRANSACTIONS

Abstract

The article describes the modernization of supervision over B2C transactions in Poland. This is an underappreciated area of this tax. It is one of the key factors for the effectiveness of VAT collection and one of its structural weaknesses, where tax collection can be disrupted.

The article focuses on the transformation of the control tool—the cash register. The digitization of this area occurred relatively late in Poland. The main emphasis was placed on B2B transactions and the protection of input tax. This delay allowed for the use of experiences from other countries modernizing their supervision over B2C transactions.

Modernization of supervision of B2C sales is a process worth observing, especially given the growing importance of e-commerce in the economy. Along with it, the importance of intangible tools supporting tax collection, such as electronic cash registers, which can operate on digital platforms, will grow.

A mixed- method approach has been utilized for this paper, consisting of the analysis of literature, legal regulations and statistical data. the main goal of the analysis was to capture the process of change and especially its dynamics.

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Key words: taxes, tax system, VAT, cash register

JEL Classification: K34

1. Introduction

Value-added tax (VAT) is the most important source of revenue for the state budget. The effectiveness of its collection is of particular concern to legislators. It is worth emphasizing that their interventions in this area usually focus on two structural elements of VAT. First, transactions conducted within the framework of business activity (B2B) and between business entities and individuals (B2C). The first type of transaction (B2B) in VAT is characterized by the presence of input tax. This structural element of VAT is the fundamental difference between it and turnover taxes. The tax liability in VAT is determined as the amount of output tax minus the amount of input tax paid at earlier stages of the supply chain. This “deductibility” of input tax is therefore essential and constitutes the main element distinguishing VAT from turnover taxes. The tax liability in VAT is thus determined in a multi-stage manner. The institution of input tax is a fundamental element of the entire VAT system. Its primary function, as a tax subject to “deduction” from output tax, is to ensure the neutrality of VAT for taxpayers. Through this, input tax—paid by the taxpayer’s counterparty—gains specific economic value, making it simultaneously vulnerable to fraud. The legislator strives to secure this element of the tax in various ways. In the case of Poland, a wide range of actions has been taken. Sometimes these were extreme measures, ranging from the elimination of input tax in certain transactions (reverse charge) to freezing it in special bank accounts (split payment). The fact that input tax occurs in transactions between VAT taxpayers, i.e., entities conducting professional business activities (B2B), allows for the application of special rules to these transactions. The most important of these are the special documentation requirements. They must be included in special documents—invoices—and cover formalized documents, as well as the rules for their creation and storage. A significant facilitation in enforcing these rules is the interest of participants in this turnover in “receiving” input tax. These elements are absent in the second area of VAT, which the legislator focuses on—transactions between taxpayers and final consumers. These are usually individuals. Unlike businesses, individuals are not interested in documenting transactions with VAT taxpayers. Input tax has no economic value for them. For tax authorities, this poses a threat that such a taxpayer

could hide the actual turnover from the tax authorities by conducting undocumented sales. Moreover, the seller also does not benefit from remitting output tax. Thus, B2C transactions are even riskier for the tax authorities than B2B transactions. This is a typical weakness for turnover taxes. Those obligated to collect them have no economic interest in doing so. An attempt to address this risk is the imposition of special rules for registering this type of sales. This is the cash register, commonly known as the fiscal cash register, along with a set of legal regulations imposing numerous obligations on its users. This special device, initially mechanical, has the function of printing (issuing) receipts confirming the sale, on the one hand, and recording sales, on the other. Paradoxically, the automation of sales recording for non-VAT taxpayers significantly preceded similar solutions applied to B2B transactions.

2. Cash Register: Automation of B2C Transaction Control

The cash register is a special form of documentation and recording of transactions, which is obligatory for a specific group of taxpayers. It ensures the automation of turnover recording for sales conducted. In Poland, this solution was introduced simultaneously with VAT itself. Transaction recording is a formalized method of maintaining turnover records and the amounts of VAT due. It is intended to enable tax authorities to verify the taxpayer's documentation and reporting obligations. The risk of verifying these transactions is meant to prevent taxpayers from underreporting income from the sale of goods or services. The cash register allows for determining whether declared turnovers, from which taxes are calculated, are close to actual ones or understated. The fiscal cash register was defined in legislation—Article 145a, section 2 of the VAT Act, which states that *the cash register (...) must ensure the correct recording of basic data concerning sales, including the taxable base and tax due, and must store this data, and in the case of cash registers with electronic copy storage—additionally ensure their secure transfer to external data carriers* [Act on Goods and Services Tax 2004].

Further elements of the definition of this device are found in a series of regulations. Until the introduction of the so-called SAF-T (Standard Audit File for Tax), used for B2B reporting, these were the most technical regulations in tax law. Even today, these regulations, particularly the Regulation of the Minister of Development, Labor, and Technology of September on technical requirements for cash registers [Regulation of the Minister

of Development, Labor and Technology on technical requirements for cash registers 2021], are an exceptional example of technical regulations in tax law. Paragraph 6 of this regulation defines the components of the fiscal cash register, listing 13 of its elements. An interesting feature of the cash register is the clear limitation of the formal authority of the device owner (the seller) over some of its elements. This is intended to ensure the ability of tax authorities to control the correctness of the seller's sales recording. Therefore, the owner of the device has been deprived of the right to perform certain actions. For example, "*access to the interior of the cash register is secured by at least one mechanical seal, and this seal is (...) marked with an identifier of the cash register service technician*" (§ 7 of the regulation). The service technician, i.e., the person handling the technical aspects of the device, has been authorized to perform specific actions on the device itself. According to § 2 of the [Regulation of the Minister of Finance on cash registers 2019], "*the service technician possesses authorization to perform service and a service technician identifier*." These actions are performed at the request of the cash register owner.

Even more restrictively, access to the fiscal memory of the cash register has been treated. This is the device component that records transactions registered in the device itself. It is through these records that it is possible to verify transactions recorded using the device. It is therefore not surprising that the legislator prevents access to this component. The fiscal memory (...) is placed (...) "*in a manner preventing access to this memory*" (§ 8). It is one of three types of cash register memory—the others are protected memory and operational memory. Protected memory, according to § 2, point 13 of the regulation of September 12, 2021, is "*a device permanently contained in the online cash register, containing an electronic data carrier, enabling the recording and reading of fiscal and non-fiscal documents issued using this cash register and other data related to the use of the cash register under the direct control of the cash register's operating program, in a manner preventing their alteration without detection during the verification of records from the fiscal memory*." The next point (14) of this paragraph defines fiscal memory as "*a device permanently contained in the cash register, containing an electronic data carrier, enabling a one-time and non-replaceable recording of data under the direct control of the cash register's operating program, which are irremovable without destroying the device itself, and multiple readings of this data*." Of course, in the classic fiscal cash register, the basic problem

is the access of tax authorities to data in the fiscal memory. This is possible essentially only in the case of a tax audit at the taxpayer's premises. This means that control actions will always be performed with a significant delay. The legislator strives to strengthen the control capabilities "programmed" into the fiscal cash register by appropriately shaping the obligations of cash register users. These constitute a separate tool of pressure on taxpayers to fulfill their obligations. They are numerous and formulated in a casuistic manner. According to Article 111, section 3a of the VAT Act, the VAT taxpayer is obliged, among other things, to issue a fiscal receipt or invoice for each sale, immediately report any irregularities in the operation of the cash register to the appropriate entity conducting cash register services, make the cash register available for inspection of its integrity and proper operation upon request by the relevant authorities, and subject the cash register to technical inspection by the appropriate entity conducting cash register services. Further obligations include the necessity to store copies of documentation generated by the cash registers themselves. The legislator has imposed strict—even for VAT regulations—sanctions to enforce these behaviors. The most severe is the inability to conduct sales, i.e., in many cases, *de facto* business activity—when recording transactions is not possible (Article 111, section 3 of the VAT Act). Violation of the obligation to maintain records using a cash register may result in the imposition of an additional tax liability (so-called sanction) in the amount of 30% of the input tax paid on the purchase of goods and services.

It is worth asking whether the significant conceptual and legislative effort put into supervising B2C transactions by the legislator has resulted in the effectiveness of collecting public revenues from these transactions. Experiences—not only in Poland—show that the efforts of the legislator and the burdens imposed on taxpayers obligated to use fiscal cash registers do not lead to the complete elimination of the so-called gray market. Moreover, in some sectors with a particularly high share of unregistered business activity (so-called black and gray market), the obligation to use cash registers is *de facto* unenforceable. Similarly, the control of the proper use of cash registers, conducted through the verification of the correctness of recording these transactions by the tax administration, has serious limitations. In the case of mechanical devices—even with electronic transaction memory (as in Poland)—it is possible only based on the inspection of these devices at their place of operation. Considering the number of cash

registers in use—about 2.5 million devices operating simultaneously—the risk of inspection for the taxpayer is very low. It was not possible to verify in real-time whether and what sales were being recorded or whether there were interruptions in recording. Therefore, various unconventional solutions were attempted. In Poland, a receipt lottery was organized. Customers who submitted receipts received during purchases could win prizes in such a lottery. Of course, it was intended to encourage customers to collect and store fiscal receipts. The tax administration conducted intensified inspections of the correctness of issuing receipts for sales. All these actions did not yield significant results. Additionally, the successive extensions of the scope of cash register use to new professional groups often caused resistance and protests. The recording system based on fiscal cash registers therefore required modernization.

3. Modernization of Supervision over B2C Transactions

The process of modernizing supervision over B2C transactions was part of a larger process that focused primarily on transactions conducted between professional entities (B2B). It was based on the digitization of VAT and its collection. The specificity of Poland was the modernization of B2C collection after the digitization of B2B transactions. In many countries, the reform of tax collection from B2C transactions was one of the first stages of VAT digitization. The key element of these changes was the digitization of the cash register system, commonly known as online cash registers. The solution introduced in Poland focused on the systematic transmission of sales data from receipts recorded in the cash register to a central memory managed by the tax authority. The general scheme of this system assumes constant communication between the taxpayer and the tax authority. According to estimates by the Ministry of Finance, tightening the system of retail sales recording due to the introduction of online cash registers was expected to increase VAT revenues by 1–2% (which, according to the Ministry, would be a significant amount on a national scale) [Ministry of Finance 2018]. These expectations were not unfounded. In the solution analyzed by the Polish Ministry of Finance, introduced by Hungary, an 8% increase in VAT revenues was recorded for the entire year 2014 (the first year of the online cash register system), and a further 7% in 2015 [Proppe, Darski 2016]. A similar success was achieved with the introduction of online cash registers in Croatia. In some sectors of the economy, tax revenues increased by 40%. According to data

from the Croatian Ministry of Finance, restaurants, lawyers, and traders reported about 18% higher turnovers after one year of operating online cash registers. According to official information from the Croatian Minister of Finance, since 2013, when the online cash register system was introduced, sellers and entrepreneurs have doubled their declared turnovers [Proppe, Darski 2016].

It is worth emphasizing that the process of introducing new solutions in Poland was exceptionally long. This is particularly evident against the backdrop of the quickly implemented changes for B2B transactions. Only on August 17, 2016, did the Minister of Development present a draft regulation on the criteria and technical conditions that new cash registers must meet. It underwent numerous and significant changes. The next version, i.e., the draft of May 23, 2017, was published on July 20, 2017. According to the draft, from January 1, 2018, the digitization of fiscal documents and reports and the online transmission of data from fiscal cash registers (in the form of the Standard Audit File) to the central database managed by the Minister of Finance were to be introduced. However, legislative work was prolonged, and online cash registers became a reality only on June 22, 2018—when the Regulation of the Minister of Entrepreneurship and Technology of May 28, 2018, on the criteria and technical conditions that cash registers must meet, was announced [Regulation of the Minister of Entrepreneurship and Technology on the criteria and technical conditions that cash registers must meet, 2018].

The draft amendment to the VAT Act introducing online cash registers was submitted to the parliament on April 27, 2018, obliging only some entrepreneurs to implement online fiscal cash registers by the end of 2018 (according to the adopted provisions, this deadline was changed to December 31, 2019 – [Regulation of the Minister of Entrepreneurship and Technology on the criteria and technical conditions that cash registers must meet, 2018; Adamczyk 2019: 17]).

The main assumption of the new online cash register system was the continuous, automated, and direct transmission of information from the maintained records and about events significant for the operation of cash registers. The scope of information is broader than transaction data; it also includes information about the activation and termination of the cash register's operation. The goal was to facilitate access to this data for tax authorities, previously scattered across individual cash registers. The heart of the new

system of supervision over B2C transactions is the central database, collecting information about transactions recorded by fiscal cash registers but scattered across the memories of millions of devices. In Poland, the Central Repository of Cash Registers (CRK) was created for this purpose, going beyond the definition of a database. It is an independent IT system. It was formally defined in the provisions of the VAT Act. According to Article 111a, section 2, point 1 of the VAT Act, the CRK is an IT system for receiving and storing data from cash registers. These are data about events recorded in the memories of cash registers, significant for the operation of cash registers, which occurred during the use of these cash registers, including the process of registering a cash register with the tax authority (so-called fiscalisation) of the cash register, changes in tax rates, changes in the sales point address, and dates of technical inspections. This system receives and stores data from cash registers for analytical and control purposes. The CRK also has the ability to send commands to cash registers. The law does not regulate what commands can be sent to fiscal cash registers and how they should be executed by these devices. It is explicitly stated in the law that data from fiscal cash registers will not only be centrally stored but also that there is the possibility of direct communication by tax authorities, which has a preventive character. The taxpayer is aware that their activity is monitored throughout the period of conducting sales using fiscal cash registers. The CRK allows the Head of the National Revenue Administration to monitor all transactions documented using online cash registers in real-time. The introduced solutions are a continuation of the policy regarding the fiscal memory of classic cash registers. The electronic system is also to ensure the connection and transfer of data from each online cash register to the CRK in a manner that prevents human interference in the data transmission and—more importantly—in the operation of such a cash register. The Polish solution does not assume the necessity of maintaining a continuous connection between the online fiscal cash register and the CRK. Information from the fiscal cash register is transmitted in specific communication sessions when documents from the entire day's work are sent. This makes the taxpayer's situation more bearable, although it deprives the tax authorities of constant supervision over a given device. In practice, this is not a significant flaw for tax authorities. "Online" access in real-time to all devices (in 2024, about 2.4 million fiscal cash registers are in use nationwide) is impossible to utilize, as there are simply too many devices. The solution of establishing communication

sessions with devices allows for reducing the costs of operating the system while ensuring access to and verification of incoming data. Devices that do not log in during these communication sessions will, of course, raise suspicions of control authorities. Formally, the legislator has imposed on the taxpayer the obligation to ensure a connection enabling the transmission of data between the online cash register and the Central Repository of Cash Registers in a specified manner. In case of connection problems with the CRK, independent of the taxpayer, the taxpayer is obliged to ensure this connection immediately after the cessation of these causes, while being obliged to maintain records using the cash register. In the situation where the inability to ensure the connection is permanent, the taxpayer is obliged to maintain sales records and, with the consent of the head of the tax office, ensure this connection at intervals agreed with the head of the tax office.

Not only the transmission of data but also the process of registering the online cash register with tax authorities has been automated. The fiscalization process (registering the cash register with the head of the tax office) occurs automatically and does not require actions from the taxpayer.

Unlike the solutions used for the introduction of the Standard Audit File or the submission of declarations in electronic form, the obligation to transmit data is performed without human involvement (apart from the stage of connecting the cash register to the telecommunications network, which will be performed by the so-called service, i.e., the entity handling the operation of the fiscal cash register). Data is transmitted on an ongoing basis, as transactions are recorded by the taxpayer.

The purchase of an online cash register, as in the case of classic fiscal cash registers, entitles the taxpayer to a refund for its purchase. It was assumed that the gradual replacement of currently used devices with online cash registers and the phased replacement of the oldest, technologically outdated cash registers with new ones would occur.

4. The process of replacing cash registers with electronic devices

The legislator's assumption was the gradual replacement of existing cash registers with new electronic devices. The replacement was therefore to be a natural process, related to the end of the service life of the devices. In subsequent years, the pace of replacing fiscal cash registers with online

(and virtual) cash registers clearly accelerated. Number of online/virtual cash registers (the first virtual cash registers were fiscalized in December 2020):

- 2019: 147,030
- 2020: 361,772
- 2021: 727,137
- 2022: 885,055
- 2023: 1,071,889
- 2024: 1,102,915 (including 38,177 virtual)¹

The clear acceleration of the replacement process after 2022 is not accidental. The legislator, by introducing online cash registers, imposed on taxpayers the obligation to use this solution at the expense of older models. Older models could only be replaced by models with online communication capabilities. Fiscalization of cash registers with electronic copy storage (but without connection to the Central Repository of Cash Registers) was possible only until December 31, 2022, and for cash registers with paper copy storage until August 31, 2019. At the same time, it was stipulated that in the case of cash registers with paper copies, the fiscal memory of these cash registers was not subject to replacement. At the same time, in relation to certain types of sales, the ability of taxpayers to use their existing cash registers has been additionally limited in time. These were industries that were considered to be areas of increased risk of record-keeping irregularities. taxpayers could keep records of sales using cash registers with electronic or paper copies within the deadline:

1. December 31, 2019—for:
 - a) services of repairing motor vehicles and mopeds, including tire repair, mounting, retreading, and regeneration, as well as tire or wheel replacement for motor vehicles and mopeds,
 - b) sales of motor gasoline, diesel oil, gas intended for combustion engines;
2. June 30, 2020—for:
 - a) services related to catering provided exclusively by stationary catering establishments, including seasonal ones, as well as short-term accommodation,
 - b) sales of coal, briquettes, and similar solid fuels made from coal, lignite, coke, and semi-coke intended for heating purposes;

¹ Source: own calculations based on data obtained from the Ministry of Finance.

3. December 31, 2020—for hairdressing, cosmetic, and cosmetology services, construction services, medical care provided by doctors and dentists, legal services, and activities related to facilities serving physical fitness improvement, exclusively in the scope of entry.

Online fiscal cash registers are not the ultimate solution for the electronization of supervision over B2C sales. The latest solution in this area is electronic cash registers, also known as software cash registers. The characteristic feature of these devices is their virtuality. Electronic cash registers are specialized programs that perform the tasks of cash registers. They are simply specialized software. Their introduction into polish legal system occurred simultaneously with classic “online” cash registers.

The [Act amending the VAT Act and the Act on Measures, 2019] and the [Regulation of the Minister of Finance on cash registers, 2019] enabled the use of a new type of cash registers—virtual cash registers. Both devices are incomparable. Even online cash registers and electronic cash registers differ fundamentally, but from the perspective of the entire system managed by the CRK, they operate very similarly. They also provide the possibility of automated and direct transmission of data from the cash register to the CRK. Of course, the difference for the user is fundamental—a virtual cash register is software installed on a smartphone, tablet, laptop, or other device. Virtual cash registers are therefore fundamentally different from previous cash registers. They are immaterial—they have no physical form and can function in the memory of another device. This significantly expands the scope of application of such a solution into areas that have so far effectively avoided the control of cash registers. By introducing electronic cash registers, it was decided to define two models of them. The first is general cash registers—cash registers intended for maintaining records without the need to use special functions. They are virtual counterparts of classic cash registers. The second type of cash registers are those built for specific solutions, conducting sales of specific goods and services. As an example, one can point to cash registers for recording passenger transport by car (taxi) or for maintaining sales records in vending machines. One of the earliest markets covered by this solution was automatic car washes. The common feature of both types of cash registers is the database and the cash register's operating program. Data stored in the database itself are encrypted. The process of implementing virtual cash registers proceeds

very similarly to the beginnings of online fiscal cash registers. It is gradual, and the first sectors of the economy obliged to use cash registers are those where the scale of unregistered turnover and tax evasion was high. These included sectors such as:

- Passenger transport by car, including taxi (excluding occasional transport)
- Car rental with a driver—PKWiU 49.32.12.0
- Car washing, cleaning, and similar services (PKWiU 45.20.30.0),

Electronic cash registers are recording devices that can function in the platform economy. The first footholds of electronic cash registers in this environment are cash registers used by platforms such as Uber, Bold. Undoubtedly, this is only the beginning of the application of this solution.

5. Summary

The modernization of supervision over the collection of tax from B2C transactions is a process of enormous scale. It involves not only the replacement of several million devices but also the construction of an IT system to manage them. The obvious goal of these actions is to increase tax revenues, although arguments about the benefits for taxpayers from the introduction of these solutions are also pointed out. Here, attention is drawn to the reduction of regulatory burdens. Primarily, the reduction of paper documents, starting with the lack of obligation to store paper rolls for issuing receipts, the electronization of the entire cash register registration process, i.e., fiscalization. Easy access of tax authorities to data contained in cash registers reduces the number of audits conducted. Undoubtedly, these are the advantages of the new solutions. However, it is necessary to pay attention to new obligations and burdens. The greatest inconvenience will be the expense of purchasing the device. The possibility of a refund when purchasing new cash registers has been retained, but it is still only a part of the expenses. The taxpayer also bears the costs of access to the electronic system of connection and data transmission (e.g., the location of the sales point). Taxpayers are also obliged to adapt systems, cash registers, and prepare staff handling customers to the new type of devices. A common benefit of the electronization of supervision over B2C transactions is the elimination of the gray market. This enables “honest” taxpayers to compete with those avoiding paying taxes, who, by definition, have lower costs of conducting business activity. The state budget, of course, benefits, as it begins to receive tax revenues.

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