

Anna KOWAL-PAWUL*

 <https://orcid.org/0000-0003-3303-0348>

STRUCTURED E-INVOICES AS A MANIFESTATION OF THE DIGITIZATION OF THE TAX ON GOODS AND SERVICES IN POLAND – SELECTED ASPECTS

Abstract

Background: The subject of the research is structured e-invoices and their importance in the Polish tax system. Initially, the legislator said their use by Polish business owners was voluntary. However, from July 1, 2024, it will be obligatory, so paper invoices will be replaced with electronic and structured equivalents.

Research purpose: The paper will show how structured e-invoices differ from unstructured ones. It will also show the importance they have in the Polish tax system and why they can be considered for the digitization of the tax on goods and services. In addition, based on survey data, the paper indicates whether Polish business owners want to use structured e-invoices voluntarily. The benefits of using structured e-invoices indicated in the survey questionnaire are also presented. The research assesses the extent of VAT digitization in Poland compared to other EU countries and identifies the factors that influence this.

Methods: The work is mainly based on the analysis of industry reports (national, foreign and EU). Polish and EU legal and tax regulations were also analyzed. At the stage of empirical research, the analysis of the results of our own surveys (primary data) was used. The survey data was supplemented with secondary data included in industry reports and Eurostat data. The analyzed variables are qualitative, which determined the statistical tool used, i.e., a fraction as the basic description parameter.

Conclusions: At the moment, the benefits are noticed mainly by the Polish legislator, while most Polish business owners do not want to use this option voluntarily. The pace and number of changes regarding digitization make the Polish legislator a leader in the European Union, although Polish business owners still have a lot to catch up on in this area, especially regarding structured e-invoices.

Keywords: structured e-invoices, digitization of VAT, VAT, tax fraud, VAT gap.

JEL classification: G28, G38, H32, H21, H25

* PhD, Rzeszów University, Institute of Economics and Finance, Department of Finance and Accounting; e-mail: annakowal@ur.edu.pl

1. Introduction

The ongoing digital transformation is creating a new reality, and artificial intelligence determines faster and more effective work, the use of smaller financial resources, and hitherto unknown forms of control. A new type of economy is emerging – the digital economy. Its defining characteristics include the intangible flow of data and information, unprecedented data integration, and the progressive automation of both physical and mental work.¹

In recent years, in Poland, and especially since 2016, there has been clear progress in the use of digital technology in the area of taxes, which has changed how the authorities communicate with the taxpayer. Traditional contact has been abandoned in favor of electronic communication.² Taxpayers increasingly rely on more advanced IT tools that support bookkeeping and settlements with the tax office. These tools automate reporting based on data from the financial system, for example, through the automatic generation of registers for VAT reporting or for preparing tax returns.³

The tax on goods and services is the area of Poland's tax system where the use of digital technology is most visible. By using modern technology, the Polish legislator tries to achieve various goals – from securing the fiscal interests of the state to supporting taxpayers in reporting obligations.⁴ The most important goal of digitizing VAT is to prevent tax evasion and thus reduce the tax gap.⁵ However, the legislator also wants to take care of the taxpayer's interests, e.g., by reducing the burden of tax inspections, reducing the costs of meeting tax obligations, or ensuring security during transactions.⁶ Despite this,

¹ **K. Śledziewska, R. Włoch**, *Gospodarka cyfrowa. Jak nowe technologie zmieniają świat*, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2020, p. 9.

² **A. Kowal, W. Lichota**, *Proces cyfryzacji podatku VAT w Polsce*, Studia Prawno-Ekonomiczne 2020/CXV, p. 266.

³ **EY**, *System stworzony od podstaw, czyli prawdziwa historia 25-lecia polskich podatków*, Warszawa 2014, p. 34.

⁴ **M. Beldzikowski**, *Cyfryzacja podatku od towarów i usług w systemie polskiego prawa podatkowego*, in: **J. Koguc-Szolno, K. Wójtowicz** (red.), *Luka podatkowa – jej przyczyny, problemy pomiaru, sposoby ograniczenia*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2019, p. 69.

⁵ **A. Kowal, G. Przekota**, *Importance of VAT digitization for income disclosure in section F-construction – a case for Poland*, *International Studies* 2021/14 (4), p. 67.

⁶ **J. Kobiela, J. Nesterak**, *Jednolity Plik Kontrolny. Klient JPK 2.0*, Krakowska Szkoła Controlingu, Kraków 2018, p. 10; **M. Macudziński**, *System Teleinformatyczny Izby Rozliczeniowej (STIR) – nowe narzędzie zwalczania wyludzeń skarbowych*, *Prawo Budżetowe Państwa*

the research shows that the intended goals concerning taxpayers have not been fully implemented.⁷

Structured e-invoices are one element of the digitization of VAT in Poland. Other elements include SAF-T (Standard Audit File for Tax), the split payment mechanism, The IT System of the Clearing House, the whitelist, online cash registers, and now also structured e-invoices. The last of those tools, which this paper focuses on, functions voluntarily in Polish economic practice. Obligatory structured e-invoices were to be introduced from January 1, 2024, in accordance with the decision of the Council of the European Union (EU);⁸ however, as a result of negotiations with business owners, the deadline was postponed to July 1, 2024.⁹

The purpose of these considerations is to show how structured e-invoices differ from unstructured ones, the importance they have in the Polish tax system, and why they can be considered for the digitization of the tax on goods and services. The paper also verifies whether this tool is used in tax systems around the world. The work is mainly based on the analysis of industry reports (national, foreign, and EU). Polish and EU tax law regulations were also analyzed. The main point of consideration is the analysis of surveys to determine whether Polish business owners have knowledge about this system, whether they are willing to use it voluntarily, and if they notice any benefits from using it. For this paper, scientific problems were formulated in the form of research questions:

1. *Do Polish business owners want to use structured e-invoices voluntarily?*
2. *What benefits of using structured e-invoices do Polish business owners indicate?*
3. *What is the level of VAT digitization in Poland compared to other EU countries, and what does it depend on?*

i Samorządu 2018/3 (6), pp. 73–74; **T. Tratkiewicz**, *Model podzielonej płatności – remedium na oszustwa w VAT?*, *Annales Universitatis Mariae Curie-Skłodowska Lublin – Polonia*, Sectio H, 2017/LI/6, p. 477.

⁷ **NIK**, *Wykorzystanie Jednolitego Pliku Kontrolnego w postępowaniach i kontrolach podatkowych*, Warszawa 2019, p. 55–58; **A. Kowal**, *Split payment mechanism in the economy of small and medium-sized enterprises*, *Zeszyty Małopolskiej Wyższej Szkoły Ekonomicznej w Tarnowie* 2019/4 (44), p. 47.

⁸ Council Implementing Decision (EU) 2022/1003 of 17 June 2022 authorising the Republic of Poland to apply a special measure derogating from Articles 218 and 232 of Directive 2006/112/EC on the common system of Value Added Tax.

⁹ *Zmiany w projekcie Krajowego Systemu e-Faktur (KSeF) po uwagach biznesu*, <https://www.gov.pl/web/kas/zmiany-w-projekcie-krajowego-systemu-e-faktur-ksef-po-uwagach-biznesu>; accessed: 10.07.2023.

2. Structured e-invoices – theoretical approach

Issuing, transferring, and storing invoices is a troublesome and time-consuming duty of business owners. This problem is particularly noticeable in businesses that deal with many contractors. Structured e-invoices can be an alternative to paper invoices and traditional document circulation. Although there has been a global tendency to replace traditional invoices with their electronic counterparts for several years, the COVID-19 pandemic significantly accelerated the process.¹⁰

At the EU level, the European Commission presented structured e-invoices in detail as far back as 2010 in the consultation document *Green Paper: On the future of VAT...*¹¹ It was proposed that invoices should be sent to a central database that monitors VAT settlements. This is intended to limit fraud related to this tax, e.g., issuing the same invoice to more than one buyer, issuing false invoices to simulate costs, or recognizing purchases that are not related to business activity. Such offenses are common with paper invoicing as the tax authorities are unable to verify the huge number of invoices issued by businesses each year. In addition, for the tax administration, e-invoicing provides real-time information that can be used to automate taxpayer audits.¹²

According to the VAT Act currently in force in Poland (Article 2 point 32),¹³ an electronic invoice is an invoice issued or received in any electronic format, e.g., PDF, JPEG, TIFF, HTML, XML.¹⁴ This definition is consistent with the definition adopted in Council Directive 2006/112/EC (Article 217)¹⁵ as amended by Directive 2010/45/EU.¹⁶ In accordance with the above-mentioned provisions, electronic invoices are therefore divided into those that are

¹⁰ *E-invoicing's Time Has Come In search of e-invoicing providers that offer data security, integration expertise, and cloud-based high-availability service*, Market Pulse.

¹¹ **European Commission**, *Green Paper. On the future of VAT. Towards a simpler, more robust and efficient VAT system*, Brussels 2010.

¹² **B. Jacobs**, *Digitalization and Taxation*, in: **S. Gupta et al.** (eds), *Digital Revolutions in Public Finance*, International Monetary Fund, Washington 2017, p. 28; **I. Grabińska-Grabowska**, *Faktury ustrukturyzowane. Alternatywna opcja dla faktur w formie elektronicznej i papierowej*, Biuletyn Euro Info 2021/6, p. 2.

¹³ Act of March 11, 2004, on the tax on goods and services.

¹⁴ **R. Burchart**, *E-faktury w polskim obrocie gospodarczym. Korzyści i bariery*, Studia Ekonomiczne, Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach 2016/299, p. 59.

¹⁵ Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax.

¹⁶ Council Directive 2010/45/EU of 13 July 2010 amending Directive 2006/112/EC on the common system of value added tax as regards the rules on invoicing.

suitable or unsuitable for automatic processing (e.g., a PDF or JPEG file as an attachment to an e-mail message).¹⁷

This article pays special attention to invoices that are suitable for automatic processing, i.e., electronic documents issued according to one pattern, and precisely in the form of a structured XML message in accordance with European standard EN-16931.¹⁸ It enables them to be transferred to the buyer and processed in computer financial and accounting systems automatically without human intervention.¹⁹

Standardized e-invoices have been used in Latin American countries for many years. In Chile, DTEs (*Documentos Tributarios Electrónicos*) are used,²⁰ while in Brazil, they use NF-e (*Nota Fiscal Eletrônica*), NFS-e (*Nota Fiscal de Serviços Eletrônica*), and CTe (*Conhecimento de Transporte Eletrônico*), and in Mexico, they use CFDI (*Comprobante Fiscal Digital por Internet*).²¹ It is no coincidence that these countries have a problem with tax fraud, and the VAT gap is a serious problem and a threat to the statutory law and the financial security of the state. In Latin America, e-invoicing has been confirmed to have significant anti-fraud potential.²² The pioneers in the EU are the Italians, who have been using *FatturaPA* (*Fatturazione Elettronica*) e-invoices in B2G transactions for many years, and since 2019, e-invoicing has been obligatory in B2B and B2C transactions (in 2017, it was voluntary).²³ The circulation of invoices in Italy takes place through a central system managed by the *Sistema di Interscambio*.²⁴

In Poland, to reduce reporting obligations, seal VAT receipts by limiting irregularities in their settlement, and identify tax fraud faster and more efficiently, from April 18, 2019,²⁵ the legislator obliged public finance sector entities that participate as contracting authorities in public procurement to collect and process

¹⁷ **A. Kowal-Pawul**, *Ekonomiczne uwarunkowania i konsekwencje cyfryzacji podatku od towarów i usług*, Bogucki Wydawnictwo Naukowe, Poznań 2023, p. 182.

¹⁸ **R. Burchart**, *Faktury ustrukturyzowane w obrocie gospodarczym. Korzyści i wyzwania dla przedsiębiorców*, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu 2022/66 (3), p. 9.

¹⁹ **Digital Poland**, *Cyfrowe fakturowanie. Praktyczny i krótki przewodnik dla MŚP*, 2020, p. 12.

²⁰ **S. Lewin**, *The Basics in Chile for DTE Invoicing*, SOVOS, 2013.

²¹ **Deloitte**, *The ABC of Internet Digital Tax Receipt (CFDI)*, Mexico 2017.

²² **A. Barreix, R. Zambrano** (eds), *Invoicing in Latin America*, New York 2018, p. 7.

²³ **M. Heinemann, W. Stiller**, *Digitalization and Cross-Border Tax Fraud: Evidence from E-Invoicing in Italy*, CESifo Working Paper No. 10227, Munich 2023, p. 2.

²⁴ **Ministero dell'Economia e delle Finanze**, *eInvoicing in Italy. Pioneering in mandate B2B eInvoicing*, 2018, p. 4.

²⁵ Act of 9 November 2018 on electronic invoicing in public procurement, concessions for construction works or services and public-private partnership.

e-invoices using the free government platform PEF (Platforma Elektronicznego Fakturowania – Electronic Invoicing Platform).²⁶ The procedure applies mainly to communes, schools, hospitals, and museums, and was one of the points of the program *From paper to digital Poland*.²⁷

However, according to a European Commission report, this optional scheme for enterprises was not popular in Poland from the beginning.²⁸ At the end of November 2019, there were 655 suppliers and 1,600 invoices registered on the platform. This is an insignificant amount because, in 2018 alone, there were about 155,000 public procurement contracts in Poland.²⁹ However, it should be considered that for public contracts worth less than EUR 30,000, electronic invoicing was only possible from the beginning of August 2019.³⁰ By comparison, in Italy, 30 million invoices are reported annually for B2G e-invoicing, almost 100% of public procurement invoices.³¹ This is mainly because the Italian legislator, on the basis of domestic law, introduced the obligation to accept electronic invoices by all central administration entities as far back as 2014, and for local administration in 2015.³² This means that the Italians already have a much broader practice of e-invoicing in the field of public procurement.³³

From January 1, 2022, a “transition” period for the use of structured e-invoices began in Poland. It was supposed to last until the end of 2023, but was postponed as part of negotiations with business owners until July 1, 2024.³⁴ This period is called the “test” period, as it is intended to allow taxpayers and the tax administration to gain experience and prepare them for the introduction of a universal (mandatory) structured e-invoicing system.³⁵ At the initial stage,

²⁶ **Comarch**, *Getting ready for exchanging e-invoices with public administration. A 2020 European e-invoicing market review*, 2020, p. 10.

²⁷ **M. Klimek**, *Program „Od papierowej do cyfrowej Polski” – założenia i stan realizacji*, XVIII Kongres Spedytorów, 2017, p. 3.

²⁸ **A. Kowal-Pawul**, *Ekonomiczne...*, p. 183.

²⁹ *Poland (2020 eInvoicing Country Sheet)*, <https://ec.europa.eu/digital-building-blocks/wikis/pages/viewpage.action?pageId=174392936>; accessed: 10.07.2023.

³⁰ **I. Grabińska-Grabowska**, *Faktury ustrukturyzowane...*, p. 2.

³¹ **A. Marton**, *E-invoicing: każda faktura autoryzowana przez Ministerstwo Finansów już w 2022 r.?*, 2020.

³² **OECD**, *Electronic Invoicing in Italy White paper*, 2021, p. 2.

³³ **A. Marton**, *E-invoicing...*

³⁴ *Zmiany w projekcie Krajowego Systemu e-Faktur (KSeF) po uwagach biznesu*, <https://www.gov.pl/web/kas/zmiany-w-projekcie-krajowego-systemu-e-faktur-ksef-po-uwagach-biznesu>; accessed: 10.07.2023.

³⁵ **K. Wróblewska, A. Sewerynek-Barszcz**, *Obowiązkowe e-Faktury ustrukturyzowane w Polsce już od 1 stycznia 2024 r. – również dla podmiotów zagranicznych z FE*, <https://www.>

the Polish legislator envisioned that the circulation of invoices in B2B and B2C transactions would be covered by an ICT system – the National System of eInvoices (Krajowy System e-Faktur – KSeF). On January 31, 2023, the implementation of KSeF was the topic of a Dialogue with Business meeting organized by the Ministry of Finance. It was decided that invoices in B2C transactions will not be covered by KSeF.³⁶ It seems that by the time mandatory e-invoicing is introduced, many provisions may have changed.

To popularize the new system, the legislator provides a number of incentives for taxpayers and emphasizes the benefits of using e-invoices, e.g.:³⁷

- A shortened VAT refund period from 60 to 40 days (provided certain conditions are met);
- No need to store and archive invoices for ten years – this obligation was imposed on the tax administration;
- No need to issue duplicates of structured e-invoices;
- A simplified correction of the tax base and VAT returns;
- A uniform invoice template, and thus the certainty that it has been issued correctly (no negative consequences for failure to include the required data or information).

There is no doubt that the implementation of e-invoices will improve the functioning of virtually all areas of a company's operations, especially accounting. Activities that accountants previously had to perform in the case of traditional invoices will be eliminated. In addition, e-invoices will provide a large amount of data that can be used by management to analyze operational efficiency and identify areas for optimization.³⁸

Whether business owners notice the above-mentioned benefits will be decided later in the article.

cy.com/pl_pl/tax/obowiazkowe-faktury-elektroniczne-rowniez-dla-podmiotow-zagranicznych; accessed: 10.07.2023.

³⁶ *Zmiany w projekcie Krajowego Systemu e-Faktur (KSeF) po uwagach biznesu*, <https://www.gov.pl/web/kas/zmiany-w-projekcie-krajowego-systemu-e-faktur-ksef-po-uwagach-biznesu>; accessed: 10.07.2023.

³⁷ **R. Burchart**, *Faktury...*, pp. 7, 10.

³⁸ **B. Zatorski**, *Czym jest elektroniczna faktura i czym różni się od PDF?*, <https://blog.symfonia.pl/trendy/po-godzinach/czym-jest-elektroniczna-faktura-i-czym-rozni-sie-od-pdf/>; accessed: 10.07.2023.

3. Data and methodology

At the stage of empirical research, we analyzed the results of our own surveys (primary data). The survey data was supplemented with secondary data included in industry reports and Eurostat data. The analyzed variables are qualitative, which determined the statistical tool used, i.e., the fraction, as the basic description parameter.

The survey was conducted from June to July 2021. A survey questionnaire was sent electronically to 6000 business owners from all over Poland from all sectors of the economy. The group was randomly selected to increase the credibility of the study and to obtain a complete picture of the situation. The database of business owners was prepared by the Central Statistical Office at the request of the author. A total of 190 properly completed questionnaires were collected. Thus, a research limitation is the inability to generalize the results to the entire population due to the number of responses. However, the collected material outlines the issues that Polish business owners face when using e-invoices.

Table 1 presents information on the size of the surveyed enterprises.

TABLE 1: *Information about the surveyed enterprises*³⁹

Group	Share of enterprises (%)
Micro	53.68
Small	28.94
Medium	13.68
Big	4.21

Source: own study based on survey data.

³⁹ The surveyed structures of enterprises differ from the structure of enterprises in general in Poland because according to Central Statistical Office data (GUS, *Działalność przedsiębiorstw niefinansowych w 2020 r.*, Warszawa 2022, p. 24), in 2021, micro enterprises comprised 97.15% of the total number of enterprises, small businesses – 2.07%, medium-sized enterprises – 0.62%, and large enterprises – 0.16%. Therefore, the research sample shows an overrepresentation of small, medium and large enterprises. However, this is a deliberate procedure and very often used in statistical practice, because maintaining proportionality in relation to the general population would result in the representation of larger enterprises being limited to just a few, which would be unfavorable for verifying their opinions.

The following questions included in the survey questionnaire are the most important from the point of view of this paper:

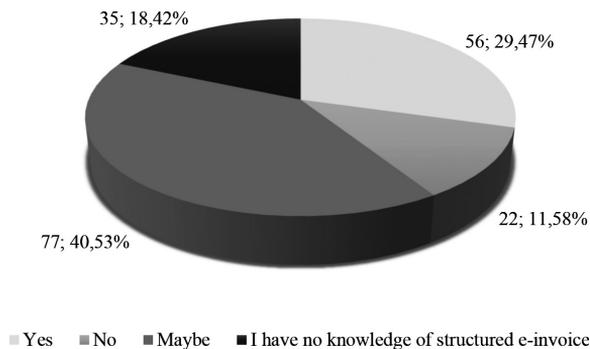
1. *Pursuant to the draft act of February 1, 2021, structured invoices suitable for automatic processing will function in Polish economic transactions and will be sent and processed using the National e-Invoice System. Initially, this is supposed to be an optional system; will you be willing to use this system voluntarily?*
2. *What, in your opinion, could encourage the voluntary use of structured invoices among Polish business owners?*

The test results will be presented in the form of a table and graph in the next chapter.

4. Survey results

The research shows that almost 30% of business owners are willing to use KSeF voluntarily (Chart 1). However, in order to implement e-invoicing in a given enterprise, the business partners should also use this system. It is possible that such a system will not be used, in which case, the company will be forced to switch to a paper invoice or in an unstructured electronic form. At the initial “test” stage, this may be an obstacle to the use of e-invoices.

CHART 1: *Percentage of enterprises willing to voluntarily use structured e-invoices*



Source: own study based on survey data.

Worryingly, about 18% of business owners have no knowledge about structured e-invoices, and almost 12% do not want to use them voluntarily. In many companies (approx. 41%), they may be implemented voluntarily.

Although the paper mainly discusses the benefits that result from the use of e-invoices, it is also worth mentioning the barriers to the voluntary use of this system. Most often, business owners indicated that they are accustomed to paper invoices and reluctance to change (57.36%), followed by a lack of knowledge about structured e-invoices (48.94%). Another indicated barrier was the costs associated with adapting the electronic document management and accounting systems (46.32%).⁴⁰ As there is still a lot of misinformation about invoicing, it is of little surprise that many businesses still believe that paper or unstructured invoices are easier and faster to use. It should also be borne in mind that merely implementing e-invoices will not immediately reduce the costs of compliance with tax regulations. As invoicing is new for many people, costs associated with the implementation must be incurred.⁴¹ It is difficult to determine how high they will be because they include not only the costs of adapting the method to financial and accounting systems, but also the costs of employee training and adapting and implementing internal procedures.

The benefits of using structured e-invoices indicated by business owners are presented in Table 2. The most important benefit for business owners is time savings (approx. 67%), as reducing the administrative burden associated with automated invoice processing frees employees to focus on higher-value activities. Other research into public procurement in Poland shows that in the vast majority of cases (77%), one paper invoice requires 1–5 people to deal with it, and 6–10 people in 21% of cases. There were also responses that 10–15 people, and sometimes even more than 15 people, are involved in traditional invoice circulation. The average working time for one paper invoice from the moment it enters the institution to the day of payment is, in most cases (51%), up to 2 hours. Meanwhile, the average handling time (the time directly spent working on the document together with the waiting time between the positions involved), from the moment it enters the institution to the day of payment, usually takes up to 5 days inclusive (47%).⁴² This is because, in the case of paper or other invoices that are not suitable for automatic processing, the documents must be stored, sorted, and re-entered into the accounting system. These steps, especially entering data into the system, are time-consuming and error-prone.⁴³ This issue is important for about 33% of the surveyed business owners.

⁴⁰ The sum of percentages for individual answers is over 100%, because more than one answer could be chosen in the question.

⁴¹ **Digital Poland**, *Cyfrowe fakturowanie...*, p. 56.

⁴² **E. Dobrzeńicka**, *Poziom e-fakturowania w instytucjach publicznych w Polsce*, e-mentor 2018/3 (75), pp. 74–75.

⁴³ **L. Barone et al.**, *eInvoicing Benefits' Analysis*, European Commission, Brussels 2019, p. 13.

TABLE 2: *Benefits of using structured e-invoices according to business owners*

Benefits of using structured e-invoices	Answers*
Time-saving	66.84%
Lower costs related to the circulation and accounting of invoices by automating these activities	51.58%
No possibility of losing or destroying an invoice	48.42%
State incentives such as the shortened VAT refund period	37.37%
A uniform model of accounting documents according to the same standards ensures that the invoice is issued in accordance with the law	36.32%
The ecological aspect of using electronic documents	35.26%
Minimizing the risk of error in reading invoice data through automation	33.16%
A more effective control system for dishonest taxpayers	21.05%
Faster payment due to automation	17.37%
I have no opinion	12.11%
Other	2.63%

Source: own study based on survey data; * the sum of percentages for individual answers is over 100% because more than one answer could be chosen in the question.

Almost 52% of business owners appreciated the lower costs related to the circulation and accounting of invoices through the automation of these activities. In five Polish units of the public procurement sector, the process of collecting a traditional invoice was compared. The average cost of handling a single document in the target process of receiving an e-invoice was PLN 15.77 lower than in handling a traditional invoice. This is an average saving of about 20% per document.⁴⁴ The European Commission estimates that between 2015 and 2017 alone, the use of e-invoicing by EU companies resulted in savings of €920 million.⁴⁵

In addition, invoicing allows the user to quickly send a document with an automatic confirmation of delivery while also eliminating the risk of lost documents. E-invoices should give taxpayers certainty that the document has reached the recipient.⁴⁶

⁴⁴ 18 kwietnia zaczęła obowiązywać e-faktury m.in. w zamówieniach publicznych, <https://www.gov.pl/web/rozwoj/w-przyszly-czwartek-zaczna-obowiazowac-e-faktury-min-w-zamowieniach-publicznych>; accessed: 10.07.2023.

⁴⁵ Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, *eInvoicing: New electronic invoicing standard facilitates public procurement contracts in Europe*, 2019.

⁴⁶ **L. Daniek**, *Structured invoice: A new VAT invoicing scheme*, in: **KPMG**, *Frontiers in tax. Polish Edition*, Warsaw 2021, pp. 8–9.

More than 37% of business owners indicated that providing incentives (including fiscal incentives) for those who want to use e-invoices voluntarily may also be a significant benefit. An authority that has done this is Singapore, which offered a subsidy to implement invoicing.⁴⁷ Meanwhile, the Polish legislator has provided a tax incentive in the form of a shortened VAT return period.

For many business owners, it is also important to standardize the template of accounting documents, which ensures the correctness of invoicing. This proposal has already been expressed in the form of an interpellation to the Minister of Finance on the unification of the template and digitization of VAT invoices.⁴⁸

The ecological aspects, which were pointed out by over 35% of the surveyed entities, cannot be overlooked. E-invoicing eliminates paper consumption and allows the user to skip activities that may have a negative impact on the environment. Removing one paper invoice will not make a significant difference, but digitizing some of the tens of billions of invoices sent every year in Europe could have a huge impact. In addition to helping to meet the sustainability goals that many businesses now set themselves, being able to reduce the number of prints and shipments is simply a good and valued business practice.

A positive aspect indicated by enterprises (21.05%) is a more effective control system for dishonest taxpayers. As a result, it can reduce the scale of tax fraud, especially in cross-border transactions, and foster fair competition. Tax authorities can use software and AI to quickly check a huge number of transactions and compare them with other data.⁴⁹ The tax departments of the EU countries concerned try to collect huge amounts of data on all relevant issues – in accordance with the big data concept. Taking into account all fiscal documents, it is the invoice that is the most complete information for the tax authorities. E-invoices can, therefore, become a key tool in reducing tax fraud, especially in cross-border transactions.⁵⁰

Another important issue indicated by some enterprises (17.37%) is making payments faster through automation. Perhaps e-invoices will significantly reduce the scale of payment backlogs in Poland. Delayed payments are often

⁴⁷ *Potential E-Invoicing Barriers and How to Overcome Them*, <https://www.unimaze.com/potential-e-invoicing-barriers-and-how-to-overcome-them/>; accessed: 10.07.2023.

⁴⁸ Interpelacja nr 13540 w sprawie unifikacji wzoru i cyfryzacji faktur VAT (20.06.2017 r.).

⁴⁹ OECD, *Technology Tools to Tackle Tax Evasion and Tax Fraud*, 2017, p. 24.

⁵⁰ B. Koch, *The e-invoicing journey 2019-2025*, Bruno Koch Billentis, Wil, 2019, p. 36.

caused by a lost invoice, sending it to the wrong address, or laborious document processing. This was also noted by the European Commission.⁵¹

Interesting conclusions can also be drawn from the research broken down by enterprise size, but this is material for further research.

5. Summary

Tax fraud and the related VAT gap have become the main motivator of digital transformation in taxes. In addition, in the face of civilizational changes in the 21st century, it becomes necessary to adjust the tax system to the changing economic conditions related to globalization and digitization.⁵² Taxpayers are increasingly obliged or voluntarily use real-time settlement models. It is expected that by 2025, they will become the world's dominant method of exchanging tax information.⁵³

Poland is one of the first EU countries to implement e-invoices in the tax system on a large scale after Spain, Italy and Portugal.⁵⁴ It seems that these tools, in their obligatory form, which will be used in the future, may bring numerous benefits to both tax authorities and taxpayers. The tax administration, with real-time data resulting from the invoices, will undoubtedly acquire another tool for analyzing and controlling VAT settlements. For taxpayers, eliminating traditional paper invoices and unifying their templates may contribute to a faster flow of documents between contractors or allow many accounting processes to be automated.⁵⁵ Therefore, e-invoices are a manifestation of the digitization of tax on goods and services in Poland.⁵⁶

For many taxpayers, the introduction of structured invoices is a big challenge, tantamount to the need to undertake time-consuming preparations

⁵¹ *eInvoicing. Send and receive electronic invoices compliant with the European standard on eInvoicing*, <https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eInvoicing>; accessed: 10.07.2023.

⁵² **J. Norregaard, T. Khan**, *Tax Policy: Recent Trends and Coming Challenges*, IMF Working Paper, Washington 2007, pp. 1–6; **R.C. Christansen, M. Hearson**, *The new politics of global tax governance: Taking stock a decade after the financial crisis*, *Review of International Political Economy* 2016/26 (5), pp. 1068–1088.

⁵³ **B. Koch**, *The e-invoicing...*, p. 7.

⁵⁴ **I. Grabińska-Grabowska**, *Faktury ustrukturyzowane...*, p. 3.

⁵⁵ **M. Puchała**, *Krajowy System e-Faktur – terażniejszość i przyszłość*, <https://casp.sgh.waw.pl/blog/krajowy-system-e-faktur>; accessed: 10.07.2023.

⁵⁶ **R. Burchart**, *Faktury...*, p. 4; **A. Kowal-Pawul**, *Ekonomiczne...*, p. 182.

and implement new approaches in terms of content, process and technology. The business, tax and technological sectors agree that adapting the organization to the KSeF requirements is one of the greatest digital challenges. The introduction of an obligatory system will be a real revolution in the Polish tax system.

There are many problems and barriers regarding the implementation of this approach in Poland.⁵⁷ Of course, it is understandable that the optional phase is intended to identify and solve organizational, legal, and technical problems and barriers. Therefore, at the moment, the benefits are noticed mainly by the tax administration; most Polish business owners do not want to use this system voluntarily. Despite the limitation of the research sample, it was possible to ascertain certain issues regarding structured e-invoices, especially those regarding the barriers and benefits that are noticed by Polish business owners.

It is worrying that many business owners did not know anything about structured e-invoices when the research for this paper was being conducted. Therefore, as the surveys show, structured e-invoices are not very popular in Poland, which was also confirmed by Eurostat.⁵⁸ The *Digital Economy and Society Index (DESI) 2022* report⁵⁹ also states that e-invoices intended for automatic processing are not yet widespread among Polish economic entities. Therefore, further research in this area and identifying barriers to the voluntary use of e-invoices in Polish business practice are important. This will help taxpayers and tax authorities better prepare for the mandatory use of structured e-invoices. It is also worth conducting research on the costs of implementing e-invoices (e.g., the costs of adapting financial and accounting programs, costs of employee training).

Although other advanced technologies are slowly gaining popularity (e.g., artificial intelligence, cloud data storage), the digitization of Polish business is almost at the lowest level in the entire EU. The pace and number of changes regarding the digitization of VAT are being led by the Polish legislator in the EU, while Polish business owners still have a lot of catching up to do.

⁵⁷ R. Burchart, *Fakury...*, p. 9.

⁵⁸ https://ec.europa.eu/eurostat/databrowser/view/ISOC_BDE15DISC__custom_6008801/default/table?lang=en; accessed: 10.07.2023.

⁵⁹ European Commission, *Digital Economy and Society Index (DESI) 2022. Poland*, 2022, p. 13.

References

- Barreix A., Zambrano R.** (eds), *Electronic Invoicing in Latin America*, New York 2018, s. 4–46, <https://publications.iadb.org/en/electronic-invoicing-latin-america>; accessed: 10.02.2023.
- Barone L., Cacciaguerra Ranghieri G., Costa I., Devenyi V., Di Giacomo D.**, *eInvoicing Benefits' Analysis*, European Commission, Brussels 2019, <https://epos.si/assets/images/Analysis-of-benefits-of-implementing-eInvoicing.pdf>; accessed: 10.02.2023.
- Beldzikowski M.**, *Cyfryzacja podatku od towarów i usług w systemie polskiego prawa podatkowego*, in: J. Koguc-Szołno, K. Wójtowicz (red.), *Luka podatkowa – jej przyczyny, problemy pomiaru, sposoby ograniczenia*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2019, pp. 69–72.
- Burchart R.**, *E-faktury w polskim obrocie gospodarczym. Korzyści i bariery*, Studia Ekonomiczne, Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach 2016/299, Warszawa, pp. 58–70.
- Burchart R.**, *Faktury ustrukturyzowane w obrocie gospodarczym. Korzyści i wyzwania dla przedsiębiorców*, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu 2022/66 (3), pp. 1–13.
- Christansen R.C., Hearson M.**, *The new politics of global tax governance: Taking stock a decade after the financial crisis*, Review of International Political Economy 2016/26 (5), pp. 1068–1088.
- Comarch**, *Getting ready for exchanging e-invoices with public administration. A 2020 European e-invoicing market review*, 2020, <https://www.comarch.com>; accessed: 7.07.2023.
- Council Implementing Decision (EU) 2022/1003 of June 17, 2022, authorising the Republic of Poland to apply a special measure derogating from Articles 218 and 232 of Directive 2006/112/EC on the common system of Value Added Tax.
- Daniek Ł.**, *Structured invoice: A new VAT invoicing scheme*, in: KPMG, *Frontiers in tax. Polish Edition*, Warszawa 2021, pp. 6–10, <https://kpmg.com/pl/en/home.html>; accessed: 10.07.2023.
- Deloitte**, *The ABC of Internet Digital Tax Receipt (CFDI), Mexico*, 2017, <https://www2.deloitte.com/>; accessed: 10.07.2023.
- Digital Poland**, *Cyfrowe fakturowanie. Praktyczny i krótki przewodnik dla MŚP*, 2020, <https://digitalpoland.org>; accessed: 10.07.2023.
- Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, *eInvoicing: New electronic invoicing standard facilitates public procurement contracts in Europe*, 2019, https://single-market-economy.ec.europa.eu/news/einvoicing-new-electronic-invoicing-standard-facilitates-public-procurement-contracts-europe-2019-04-17_en; accessed: 10.07.2023.
- Council Directive 2006/112/EC of November 28, 2006, on the common system of value added tax.
- Council Directive 2010/45/EU of July 13, 2010, amending Directive 2006/112/EC on the common system of value added tax as regards the rules on invoicing
- Dobrzeńska E.**, *Poziom e-fakturowanie w instytucjach publicznych w Polsce*, e-mentor 2018/3 (75).
- Drozdek A., Drozdek-Machalica K.**, *Posłużenie się danymi innego podmiotu w transakcjach handlowych a charakter odpowiedzialności podatkowej wystawcy pustej faktury*, Studia Prawno-Ekonomiczne 2018/CIX, pp. 43–56.
- E-invoicing's Time Has Come In search of e-invoicing providers that offer data security, integration expertise, and cloud-based high-availability service*, Market Pulse, <https://www.opentext.com>; accessed: 10.07.2023.

- European Commission**, *Digital Economy and Society Index (DESI) 2022. Poland*, 2022, <https://digital-strategy.ec.europa.eu/en/policies/desi-poland>; accessed: 10.02.2023.
- European Commission**, *GREEN PAPER On the future of VAT Towards a simpler, more robust and efficient VAT system*, Brussels 2010, https://taxation-customs.ec.europa.eu/green-paper-future-vat-towards-simpler-more-robust-and-efficient-vat-system_en; accessed: 10.07.2023.
- EY**, *System stworzony od podstaw, czyli prawdziwa historia 25-lecia polskich podatków*, 2014, <http://phavi.umcs.pl>; accessed: 10.02.2023.
- Grabińska-Grabowska I.**, *Faktury ustrukturyzowane. Alternatywna opcja dla faktur w formie elektronicznej i papierowej*, Biuletyn Euro Info 2021/6.
- GUS**, *Działalność przedsiębiorstw niefinansowych w 2020 r. Activity of non-financial enterprises in 2020*, Warszawa 2022, <https://stat.gov.pl>; accessed 10.07.2023.
- Heinemann M., Stiller W.**, *Digitalization and Cross-Border Tax Fraud: Evidence from E-Invoicing in Italy*, CESifo Working Paper No. 10227, Munich 2023.
- Interpelacja nr 13540 w sprawie unifikacji wzoru i cyfryzacji faktur VAT (20.06.2017 r.).
- Jacobs B.**, *Digitalization and Taxation*, in: S. Gupta, M. Keen, A. Shah, G. Verdier (eds), *Digital Revolutions in Public Finance*, International Monetary Fund, Washington 2017, pp. 25–55.
- Klimek M.**, *Program „Od papierowej do cyfrowej Polski” – założenia i stan realizacji*, XVIII Kongres Spedytorów, 2017, <https://pisil.pl/>; accessed: 10.07.2023.
- Kobiela J., Nesterak J.**, *Jednolity Plik Kontrolny. Klient JPK 2.0*, Krakowska Szkoła Controlingu, Kraków 2018.
- Koch B.**, *The e-invoicing journey 2019-2025*, Bruno Koch Billentis, Wil, 2019, <https://www.billentis.com>; accessed: 10.07.2023.
- Kowal A.**, *Kredyty kupieckie a zatory płatnicze*, in: M. Wasilewski, J. Bereznička (red.), *Wybrane problemy finansów publicznych i przedsiębiorstw*, Wydawnictwo SGGW, Warszawa 2020, pp. 93–103.
- Kowal A.**, *Split payment mechanism in the economy of small and medium-sized -enterprises*, *Zeszyty Małopolskiej Wyższej Szkoły Ekonomicznej w Tarnowie* 2019/4 (44), pp. 39–51.
- Kowal A., Lichota W.**, *Proces cyfryzacji podatku VAT w Polsce*, *Studia Prawno-Ekonomiczne* 2020/CXV, pp. 265–282.
- Kowal A., Przekota G.**, *Importance of VAT digitization for income disclosure in section F-construction – a case for Poland*, *International Studies* 2021/14 (4), pp. 67–86
- Kowal-Pawul A.**, *Ekonomiczne uwarunkowania i konsekwencje cyfryzacji podatku od towarów i usług w Polsce*, Bogucki Wydawnictwo Naukowe, Poznań 2023.
- Lewin S.**, *Chile DTE eInvoicing 101*, SOVOS, 2013, <https://sovos.com>; accessed: 10.07.2023.
- Macudziński M.**, *System Teleinformatyczny Izby Rozliczeniowej (STIR) – nowe narzędzie zwalczania wyłudzeń skarbowych*, *Prawo Budżetowe Państwa i Samorządu* 2018/3 (6), pp. 69–87.
- Marton A.**, *E-invoicing: Każda faktura autoryzowana przez Ministerstwo Finansów już w 2022 r.?* 2020, <https://www.rp.pl>; accessed: 10.07.2023.
- Ministero dell’Economia e delle Finanze**, *eInvoicing in Italy. Pioneering in mandate B2B eInvoicing*, 2018, <https://ec.europa.eu>; accessed: 10.07.2023.
- Puchala M.**, *Krajowy System e-Faktur – terażniejszość i przyszłość*, <https://casp.sgh.waw.pl/blog/krajowy-system-e-faktur>; accessed: 10.07.2023.
- NIK**, *Wykorzystanie Jednolitego Pliku Kontrolnego w postępowaniach i kontrolach podatkowych*, Warszawa 2019, <https://www.nik.gov.pl>; accessed: 10.07.2023.

- Norregaard J., Khan T.S.**, *Tax Policy: Recent Trends and Coming Challenges*, IMF Working Paper, Washington 2007.
- OECD**, *Electronic Invoicing in Italy White paper*, 2021, <https://www.oecd.org>; accessed: 10.07.2023.
- OECD**, *Technology Tools to Tackle Tax Evasion and Tax Fraud*, 2017, <https://www.oecd.org>; accessed: 10.07.2020.
- Śledziwska K., Włoch R.**, *Gospodarka cyfrowa. Jak nowe technologie zmieniają świat*, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2020.
- Śliwczyński B.**, *Krajowy system e-fakturowania*, E-mentor 2015/4 (61).
- Tratkiewicz T.**, *Model podzielonej płatności – remedium na oszustwa w VAT?*, *Annales Universitatis Mariae Curie-Skłodowska Lublin – Polonia, Sectio H*, 2017/LI/6, pp. 475–484.
- Wróblewska K., Sewerynek-Barszcz A.**, *Obowiązkowe e-Faktury ustrukturyzowane w Polsce już od 1 stycznia 2024 r. – również dla podmiotów zagranicznych z FE*, https://www.ey.com/pl_pl/tax/obowiazkowe-faktury-elektroniczne-rowniez-dla-podmiotow-zagranicznych; accessed: 10.07.2023.
- Ustawa z dnia 11 marca 2004 r. o podatku od towarów i usług [Act of March 11, 2004, on tax on goods and services], *Dz.U. z 2004 r., nr 54, poz. 535*.
- Ustawa z dnia 9 listopada 2018 r. o elektronicznym fakturowaniu w zamówieniach publicznych, koncesjach na roboty budowlane lub usługi oraz partnerstwie publiczno-prywatnym [Act of 9 November 2018 on electronic invoicing in public procurement, concessions for construction works or services and public-private partnership], *Dz.U. z 2018 r., poz. 2191*.
- Zatorski B.**, *Czym jest elektroniczna faktura i czym różni się od PDF?*, <https://blog.symfonia.pl/trendy/po-godzinach/czym-jest-elektroniczna-faktura-i-czym-rozni-sie-od-pdf/>; accessed: 10.07.2023.

Websites

- 18 kwietnia zaczną obowiązywać e-faktury m.in. w zamówieniach publicznych*, <https://www.gov.pl/web/rozwoj/w-przyszly-czwartek-zaczna-obowiazywac-e-faktury-min-w-zamowieniach-publicznych>; accessed: 10.07.2023.
- eInvoicing. Send and receive electronic invoices compliant with the European standard on eInvoicing*, <https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eInvoicing>; accessed: 10.07.2023.
- https://ec.europa.eu/eurostat/databrowser/view/ISOC_BDE15DISC__custom_6008801/default/table?lang=en; accessed: 10.07.2023.
- Poland (2020 eInvoicing Country Sheet), <https://ec.europa.eu/digital-building-blocks/wikis/pages/viewpage.action?pageId=174392936>; accessed: 10.07.2023.
- Potential E-Invoicing Barriers and How to Overcome Them*, <https://www.unimaze.com/potential-e-invoicing-barriers-and-how-to-overcome-them/>; accessed: 10.07.2023.
- Zmiany w projekcie Krajowego Systemu e-Faktur (KSeF) po uwagach biznesu*, <https://www.gov.pl/web/kas/zmiany-w-projekcie-krajowego-systemu-e-faktur-ksef-po-uwagach-biznesu>; accessed: 10.07.2023.

Anna KOWAL-PAWUL

USTRUKTURYZOWANE E-FAKTURY JAKO PRZEJAW CYFRYZACJI PODATKU OD TOWARÓW I USŁUG W POLSCE – WYBRANE ASPEKTY

Abstrakt

Przedmiot badań: Przedmiotem badań są e-faktury ustrukturyzowane i ich znaczenie w polskim systemie podatkowym. Na początkowym etapie wdrożenia tego rozwiązania ustawodawca pozwala na dobrowolność stosowania przez polskich przedsiębiorców. Od 1 lipca 2024 r. ma być to rozwiązanie obligatoryjne, zatem papierowe faktury zostaną zastąpione ich elektronicznymi i ustrukturyzowanymi odpowiednikami.

Cel badawczy: Celem rozważań jest ukazanie, czym różnią się e-faktury ustrukturyzowane od tych nieustrukturyzowanych, jakie znaczenie stanowią w polskim systemie podatkowym i dlaczego można je zakwalifikować do procesu cyfryzacji podatku od towarów i usług. Ponadto, na podstawie danych ankietowych wskazano, czy polscy przedsiębiorcy chcą korzystać z e-faktur ustrukturyzowanych dobrowolnie. Przedstawiono również korzyści ze stosowania e-faktur ustrukturyzowanych wskazane w kwestionariuszu ankiety. Podsumowaniem badań jest określenie poziomu cyfryzacji podatku VAT w Polsce na tle innych państw UE i od czego zależy ten proces.

Metody badawcze: W pracy posiłkowano się głównie analizą raportów branżowych (krajowych, zagranicznych oraz unijnych). Przeanalizowano również polskie i unijne przepisy prawno-podatkowe dotyczące tego rozwiązania. Na etapie badań empirycznych znalazła zastosowanie analiza wyników badań ankietowych własnych (danych pierwotnych). Dane ankietowe wzbogacono danymi wtórnymi umieszczonymi w raportach branżowych i danymi Eurostatu. Analizowane zmienne to zmienne typu jakościowego, co zdeterminowało wykorzystane narzędzie statystyczne, czyli frakcję jako podstawowy parametr opisu.

Wyniki: Na ten moment korzyści zauważane są głównie przez polskiego ustawodawcę, a polscy przedsiębiorcy w większości z tego rozwiązania nie chcą korzystać dobrowolnie. Można zauważyć, że tempem i ilością zmian dotyczących cyfryzacji polski ustawodawca przoduje w Unii Europejskiej, natomiast polscy przedsiębiorcy mają jeszcze dużo do nadrobienia w tym zakresie, a szczególnie w zakresie e-faktur ustrukturyzowanych.

Słowa kluczowe: e-faktury ustrukturyzowane, cyfryzacja VAT, VAT, oszustwa podatkowe, luka VAT.