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Technological Revolution in Taxes

Abstract

This paper concerns a broader technological revolution which is currently happening all around the world, including Poland, in terms of tax return completion. The paper is divided into parts. The individual parts indicate and describe the current state, change-causing factors as well as the changes progressing currently both in Poland and the world. The purpose of this paper is to analyse and describe the possibilities resulting from the automation of the tax returns completion process and to determine the directions of potential changes in the future.

Keywords: JPK, technological revolution in taxes, analyse of taxes data, doing taxes, taxes, VAT, CIT, ERP

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The current state in Poland and change-causing factors

Technological changes and their consequences have already affected all areas of life. In terms of tax return completion, major changes, caused by technological progress and the opportunity to process great datasets both by taxable persons and tax authorities also occur.

Until recently, significant disparities between the use of technology by taxable persons and tax authorities could be noticed in Poland. The tax authorities, until the introduction of reporting in the form of the Polish equivalent of SAF-T files [hereinafter referred to as JPK³], made very limited use of the opportunities offered by the analysis of digital files and the possibility of processing practically unlimited datasets. However, taxable persons, especially the largest ones or those that are part of international capital groups, have already used technology in order to manage their enterprises and do their taxes.

The taxable persons have used both simple pieces of software that made it easier to do taxes on an ongoing basis or automating repetitive activities (e.g. verifying the exchange rate used) and more complex tools that even covered the management of the entire enterprise, the so-called ERP⁴ systems, so far. Integrated or modular ERP systems were and are very common in Poland and they help taxable persons to both do their taxes and manage their enterprises⁵ in general.

At the beginning, it is necessary to differentiate between the facultative use of technology for completing tax returns by taxable persons, which is led by the desire to simplify and automate processes, and the forced use of technology for completing tax returns which is the result of changes in law which force taxable persons to pay or report their taxes in a specific way.

It should be pointed out that in Poland, practically up to mid-2016, taxable persons were not required to use any technologies, and the implementation of the latter could only make doing taxes and general enterprise management easier. As indicated above, the automation of the process of tax return completion was used chiefly in large companies due to the scale of their activity and a high number of

³ JPK – Jednolity Plik Kontrolny. A possible literal translation into English could be 'Unified Control File' [translator's note].

⁴ Enterprise resource planning – ERP.

⁵ T. Gospodarek, *Systemy ERP. Modelowanie, projektowanie, wdrażanie*, Gliwice 2015.

transactions which required proper reporting for tax and accounting purposes. In most cases, it took place through the automation of tax functions in advanced ERP financial and accounting systems.

Undoubtedly, a turning point in the process of using technologies in the tax system in Poland. The turning point was the introduction of the obligation to submit reports in the form of JPK and the necessity to send JPK_VAT files, or VAT registers in the form of a JPK file structure, electronically on a monthly basis.

JPK_VAT structures were first required from the largest taxable persons,⁶ and now the obligation to prepare them applies to every taxable person, even a micro-entrepreneur. The implementation of JPK coincided with the withdrawal of the opportunity to submit most tax returns on paper. Thus, the thesis that **a real technological revolution in doing taxes in Poland began with the implementation of JPK** seems justified.

A question could therefore be asked: why was there any revolution in taxes at all? Undoubtedly, there are two groups of factors which, in a sense, forced changes in the form of completing tax returns and caused the use of technologies by taxable persons.

The first group of factors consists of technological factors which mainly influence the facultative implementation of new technologies by taxable persons. The factors in this group are as follows:

- 1) General technological advancement, including the opportunity of easy communication by electronic means both with the tax authorities and within a taxable person's enterprise,
- 2) The necessity of analysing so-called "big data" quickly and in detail and reporting them to international capital groups by taxable persons,
- 3) An increase in labour costs and the necessity for the automation of repetitive activities,
- 4) Developing infrastructure and resources for the implementation of new technologies,
- 5) The use of modern technologies, including ERP systems without which the business activities of many taxable persons would be impossible or significantly more difficult to conduct due to their scale.

As for the second group, it consists of pro-fiscal factors which influence the forced use of technologies used in order to complete tax returns. This group includes:

⁶ From July 2016.

- 1) The necessity of limiting tax frauds which are possible to detect exclusively in case of the tax authorities' continual and current analysis of transactions,
- 2) The need for introducing the transparency of tax returns which would make it possible to analyse transactions between contractors and to identify incorrect transactions,
- 3) Ensuring the full transparency of a taxable person's activities,
- 4) The automation of tax inspections and an increase in their efficiency, thanks to the possibility of verifying almost all transactions of a taxable person in an unusually precise way,
- 5) Prevention of events which have a negative influence on the state of government finances,
- 6) The desire for exact predictions of state revenue and the possibility of reacting quickly to changes,
- 7) Reducing the operating costs of the tax administration, thanks to the use of new technologies,
- 8) The possibility of cross-verifying B2B transactions thanks to two-sided reporting, as in case of JPK_VAT.

Tax technologies in Poland and around the world

The level of the forced automation of doing taxes varies significantly in individual countries. Obviously, the pace and manner of digitalising completing tax returns is different for every country, however, all countries pursue the same goal – they intend to collect, process and report tax information, and by analysing it properly, they intend to make it possible to conduct efficient and effective tax audits by means of as few resources as possible.

Examples of countries which are advanced in the process of the automation of completing tax returns and have implemented interesting instruments to force the digitalisation of doing taxes are presented below. Poland, that has so far implemented a number of developed mechanisms which provide access to a huge database on every taxable person's business activity for the tax authorities, will be the starting point. However, the tax authorities are not always equipped with a tool that is sufficient for analysing such data resources, though there is undoubtedly constant progress in this respect.

Poland

JPK

At present, JPK consists of seven structures which mirror individual registers and accounting and tax documents, and it is based on the model of the SAF-T⁷ file developed by the OECD. Files are created in XML format. Only the JPK_VAT structure which mirrors VAT registers is sent by taxable persons without a prior call, in monthly periods, by deadlines for submitting a monthly VAT return. It should be noted that the monthly periods of JPK_VAT reporting also apply to those taxable persons who submit quarterly VAT returns. The remaining structures should be sent by a taxable person to the tax authorities upon request.

Data in the sent JPK_VAT files involve all transactions which are taxable for VAT purposes, so they provide precise information on a taxable person's business. It should be noted that in obtaining data concerning both output VAT and input VAT, the tax authorities are able to relate declared input VAT to output VAT, which should limit a potential possibility of the extortion of unpaid VAT, meaning, to detect a situation in which input tax was deducted, whereas output VAT was not declared. Additionally, in practice, the JPK_VAT files submitted by taxable persons form an electronic register of invoices in the database of the tax authorities, as those authorities have information on every invoice settled for VAT purposes, in terms of both purchases and sales.

The remaining structures involve:

- accounting ledger – JPK_KR
- bank statements – JPK_WB
- storage – JPK_MAG
- invoices – JPK_FA (line by line)
- the revenue and expense ledger – JPK_PKPIR
- revenue registry – JPK_EWP.

STIR

The act introducing STIR⁸ is aimed at restricting the VAT gap caused by extortion. The act introduced a system, the purpose of which is to eliminate shell entities

⁷ Single Audit File for Tax – a standard presented by the OECD. It allows for the standardisation of financial data reporting. It is characterised by a unified structure the requirements of which can be met by all taxable persons.

⁸ Ustawa z 24 listopada 2017 r. o zmianie niektórych ustaw w celu przeciwdziałania wykorzystywaniu sektora finansowego do wyludzeń skarbowych (Dz.U. z 2017 r., poz. 2491) (Journal of Laws of 2017, item 2491).

that cheat fair entrepreneurs from business trading, and, as a result, improve VAT payers' safety in trading.

This aim is pursued by the Head of the National Tax Administration (KAS), by using data in the ICT system of the clearing house, and a special algorithm which determines the so-called risk indicator (the algorithm has not been published) on the basis of available data. The use and processing of the data is automated, and the Head of the National Tax Administration, banks and credit unions receive the results of analysis of those data – among others, in the form of determining of the risk indicators which also take the provisions of the Act on prevention of money-laundering and financing terrorism into account.⁹

In case of a specified risk indicator according to the algorithms set systemically, the Head of the National Tax Administration has the right to block a business bank account for 72 hours, and the account can be blocked for another 3 months after that period. Thus, the effects of the STIR system may pose a significant threat to the functioning of enterprises, while they result exclusively from the fully automated functions of the system. Therefore, it is essential to adopt appropriate system assumptions so that the results are correct and make it possible to achieve the objectives in the form of limiting tax frauds.

Electronic financial statements

As of 1 October 2018, full digitalisation in Poland has also covered financial statements which should be submitted as XML files with a logical structure and in the format provided in the Public Information Bulletin (Biuletyn Informacji Publicznej) on the website of the office of the minister competent for public finances.

MDR

The implementation of the MDR¹⁰ system (i.e. the obligation to report tax schemes) is, to some extent, an implementation of Council Directive (EU) 2018/822 of 25 May 2018. However, the Polish model goes much further. Thanks to the reporting system that has been applicable since 1 January 2019, the Head of the National Tax Administration is informed on those activities of taxable persons which will meet certain conditions specified in the act.

However, those conditions are very broad and indistinct, which means that determining precisely which tax schemes should be reported and which should

⁹ In Polish: Ustawa o przeciwdziałaniu praniu pieniędzy oraz finansowaniu terroryzmu [translator's note].

¹⁰ Mandatory disclosure rules.

not is so difficult that numerous entities may report all pieces of the tax advice that they receive.

Reporting is done by means of an XML file with a specified structure, which will next be analysed by the tax authorities. This will probably be done automatically to some extent. The tax authorities may thus obtain information on taxable persons' planned activities, which, in view of data included in JPK files, will make it possible to conduct a tax audit by using automatic algorithms (including with taking the reported tax schemes into account).

Online cash registers

There are plans to introduce electronic cash registers and e-receipts in Poland. The purpose of the government draft amendment of the VAT Act and the Trade Metrology Act,¹¹ prepared in this regard, is to introduce a solution that would allow for using cash registers sending data to a central ICT system maintained by the Head of the National Tax Administration (so-called online cash registers) for the purpose of keeping records of sales and amounts of tax due from selling to natural persons engaging in no business activity and to flat-rate farmers. The draft provides for the creation of the Central Cash Register Repository to which data from cash registers will be uploaded constantly, automatically and directly, in a specified electronic logical structure (JPK).

VAT return in the form of a JPK file and the central register of invoices

An interesting form of digitalisation in the nearest future is also supposed to be the resignation from the obligation to submit standard VAT returns which are to be replaced by extending the scope of data in a JPK_VAT file by boxes from the VAT declaration form. Such a proposal was presented in the draft amendment of 30 November of the VAT Act and the Tax Ordinance Act.

Importantly, regulations concerning the creation and functioning of the Central Register of Invoices were also presented in the draft. In practice, it may be concluded that data regarding individual invoices are now already included in a JPK_VAT file that all taxable persons have been obligated to submit as of 1 January 2018. The fact that the data collection was called the Central Register of Invoices shows that the tax authorities are starting to notice and benefit from opportunities offered by analysing data in JPK_VAT.

¹¹ Sejm paper No. 2503.

Conclusions

Considering the above, it should be noted that in the last two, three years, Poland has made quite advanced changes to the digitalisation of doing taxes, which are supposed to obtain full information on a taxable person and that person's business. Taxpayers were obligated to present almost all financial data electronically. There are plans for subsequent changes in this regard in 2019. The proper analysis of data from JPK files, financial statements, the STIR system and MDR will allow for information on the current status of a given taxable person to be obtained, it will also make it possible to predict that taxable person's situation in the future, which will result in a possibility of determining the future budget revenue.

Brazil

Invoice verification in real time

The member of the BRICS¹² is currently one of the leaders in terms of the tax system digitalisation. Brazil has started the process of implementing systems that would allow the tax authorities to collect data from business accounts, their invoices and tax operations since 2002. In 2008 Brazil implemented the Public Accounting System (SPED) which includes digital accounting (EFD) and electronic invoices (NF-e). The e-invoicing system implemented in Brazil is particularly interesting due to the fact that every issued invoice has to be sent to the authorities and then it has to be verified by the Brazilian tax authority before it is sent to the contractor. The tax authorities can verify the invoice before it is allowed into the economy. Thus, an invoice includes digital information, confirmed with the tax authority.

Italy

Spesometro and invoice verification in real time

In Italy, there is both the necessity of sending VAT registries as XML files, by analogy with the Polish JPK_VAT and, as of 2019, the necessity of verifying invoices by the tax authorities. The said verification is done in real time, so the model works similarly to the one implemented in Brazil.

¹² The name of a group of developing countries – Brazil, Russia, India, China and the Republic of South Africa.

Hungary

Invoice verification in real time

Since 1 July 2018, in case of transactions between entrepreneurs, all VAT payers have an obligation to send, domestic invoices with tax of over HUF 100,000, within 24 hours, in XML format. Interestingly, in case of non-compliance, penalty payments up to HUF 500,000 will be imposed for every unreported invoice.

Thus, Hungarian authorities can inspect issued invoices as soon as 24 hours after the issuance of those invoices, however, it should be indicated that this system exclusively allows for the inspection of invoices which have already been issued, and not for the verification of invoices before they are issued, as is the case in Italy and Brazil.

Spain

SII – Suministro Inmediato de Información

One of the more advanced forms of SAF-T files. SII is, in fact, a partial VAT register which includes data concerning issued or received invoices which, as a rule, should be reported in 4 days after issuing or receiving them. Thus, SII includes information on both the issued invoices and the received ones, and makes it possible to relate declared output VAT to input VAT. SII also covers intra-Community transactions, and in this case, the 4-day period begins to run on the day of releasing or receiving goods by a taxable person.

Great Britain

Making Tax Digital

Great Britain is also considered to be a leader among countries which introduce the full automation of tax systems. However, Great Britain does not use the model developed by the OECD – SAF-T. The digitalisation process even has its own name – “Making Tax Digital”. As part of the process, the automatic reporting of the results of VAT returns (balance from VAT declaration forms) is targeted, thanks to using an API interface and a practically direct connection of a taxable person’s system to the system of the British tax authorities. As a consequence, tax returns will be reported in real time directly to the system of the British tax authorities. Taxable persons’ obligations concerning electronic tax returns will be implemented gradually. When it comes to VAT-related obligations for large companies, they will become applicable on 1 April 2019.

The consequences of technological changes

Widely available technologies which were completely unknown earlier (as JPK files) or were introduced optionally by taxable persons (tax functions in the ERP system) make it possible to completely or significantly automate a part of the financial processes. It should be noted that using such technologies should also ensure greater safety because the process automation and the automatic audit of those processes allows one to minimise the risk of making a mistake in financial operations.

Undoubtedly, subsequent changes introduced as part of the forced digitalisation of doing taxes meant that in case of many taxable persons, there was a temporary increase in expenditures for paying taxes and certain issues related to implementation and the necessity to adjust to the requirements specified by the tax authorities.

The current effect of the tax revolution in Poland may be noticed, among others, in the position in the ranking "Paying Taxes 2018"¹³ which was lowered by 4 places – from 47th to 51st place. However, this is probably the effect of the necessity to implement many changes which, in the long run, may have a positive influence on doing taxes in Poland if some processes become even more automated.¹⁴

Another consequence of the forced digitalisation of doing taxes is the possibility of conducting automatic tax inspections. From the statement of reasons for the government draft amendment of the Tax Ordinance Act and Certain Other Acts,¹⁵ it seems quite clear what the purpose of introducing those changes is. It is the desire to conduct electronic tax inspections by designing JPK structures properly, and to develop an application for the tax authorities and tax inspection authorities. The application will support JPK files provided by audited persons. Thus, we are now getting to the point where the transparency of doing taxes increases significantly.

However, it is impossible not to notice the dangers which are associated with practically unlimited access to information on taxable persons for tax officials, and with the possibility of unauthorised access to those data.

The forced digitalisation of taxes may also mean positive effects for the same taxable persons, which are related to the increase in competitiveness in the IT market, and the greater universality of solutions which are already in use, and, as the result, a significant decrease in the prices of those solutions. One also must not overlook the fact that the opportunities obtained by the tax authorities may also be used by

¹³ Report by the consulting company PwC and the World Bank.

¹⁴ This conclusion is confirmed on page 14 of the report "Paying Taxes 2019" published by PwC at <https://www.pwc.com/gx/en/paying-taxes/pdf/pwc-paying-taxes-2019.pdf>

¹⁵ Sejm paper No. 3462.

taxable persons themselves. An internal automatic tax inspection should allow taxpayers to limit the tax risk and identify potential mistakes even prior reporting them to the tax authorities. The unified structure of files also makes it possible for consulting companies to develop applications which will significantly save their time that is necessary for conducting a standard tax audit, and the unified form of data presentation will make it possible to use those applications in a universal manner.

It should be noted, however, that technological development has only just begun, and there is still much to be done, both by taxable persons and by the tax authorities, in order to fully make use of the potential and possibilities brought by the digitalisation of doing taxes.

Potential development directions

The thesis indicated at the beginning of this paper, according to which a real revolution in doing taxes in Poland began with the introduction of JPK is confirmed because starting from that moment, a number of mechanisms have been introduced in order to force financial data reporting by taxable persons, which makes it possible to analyse and verify those data automatically. The introduction of JPK files alone was the first step which started the process of the forced digitalisation of doing taxes. However, it is undoubtedly still the initial stage of the process.

The process of digitalisation is quickening and already bringing tangible benefits both to the tax authorities and to taxable persons themselves. Undoubtedly, the digitalisation of actual events and tax returns in digital form will be a fully universal phenomenon because the benefits offered by the use of new technologies are huge. Obviously, the phase of transition to new forms of tax reporting is full of challenges for both the tax authorities and taxable persons, but the necessity for changes is unavoidable.

There are different scenarios of what doing taxes will look like in 5–10 years. At the World Economic Forum in Davos in 2016, 816 observers indicated that in 2023 and 2025, the tax authorities will use the blockchain method to collect taxes.¹⁶ What is the technology associated with bitcoin? It is a decentralised and distributed P2P (peer-to-peer), network within which performing a specified action must be accepted by all users, and the history of each event is saved and shared with the other users. There are also reports prepared by consulting companies in this regard, which

¹⁶ Online access: <https://www.coindesk.com/world-economic-forum-governments-blockchain> (access: 21.12.2018).

show the possibilities offered by the use of the blockchain technology.¹⁷ However, it should be noted that the widespread introduction of this technology would involve huge costs for the tax administration, and serious problems with understanding it by taxable persons.

An even more interesting solution would be to create a special currency for paying VAT. Such a solution was presented by Richard Ainsworth, Musaad Alwohaibi and Mike Cheetham¹⁸ as a suggestion for the Gulf Cooperation Council. Interestingly, in some countries, including Poland, a specific “VATcoin” already exists because this is the case with funds in taxable persons’ VAT accounts, and it is possible to use them in order to make a payment that corresponds to the amount of VAT.¹⁹

In the long run, the use of new technologies will seek to completely change the world of taxes as we presently know it. When it comes to the tax authorities, on the one hand, they will become more dependent on collecting and analysing tax data in digital form, and on the other hand, the use of those technologies should limit significantly signs of tax frauds. Undoubtedly, the further digitalisation of taxes is unavoidable, and all taxable persons should get used to it, investing in appropriate IT tools which will allow for the fulfilment of fiscal requirements, and, simultaneously, for the improvement of internal processes in the company, and, thus, for the limitation of tax risks.

¹⁷ For instance, a report by Deloitte – “Blockchain technology and its potential in taxes”.

¹⁸ R. Ainsworth, M. Alwohaibi, M. Cheetham, *Vatcoin: the GCC’s Cryptotaxcurrency*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2916321 (access: 21.12.2018).

¹⁹ In connection with introducing the mechanism of split payment on 1 July 2018.