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COVID-19 and its Impact on VAT Gap in the EU: Lessons from and for Poland

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Rafal M. Szewczyk[1]

Abstract:

Purpose: *This article aims to present how the VAT gap has changed due to the COVID-19 pandemic and emphasize the key factors to tackle the revenue loss that becomes even more important during the state of emergency.*
Design/Methodology/Approach: *The research design includes intuitive inquiry, content analysis of secondary sources, and desk research.*
Findings: *In 2018, the difference between expected and actual VAT revenue was EUR 140 billion in European Union. Even though it is estimated to drop down to EUR 125 billion in 2019, the COVID-19 recession will likely impact the VAT gap in 2020 due to the increase in the informal economy and the number of bankruptcies. Digitalization of VAT collection system is essential to eliminate these factors but is not the only measure to eliminate the difference between actual and expected VAT revenue.*
Practical impact: *Effective VAT system can be achieved only if digitalization is followed by transparent law, taxpayers' education, a suitable penalty system, and substantial tax administration. Governments can use the finding of the research and its conclusion in tackling the VAT gap.*
Originality/Value: *Examination of the VAT gap composition and proposal of standardization of technological solutions combined with soft measures to solve the problem of VAT revenue loss. VAT gap can be tackled effectively only if all determinants of the VAT gap are taken into account; technologies are explored as complementary models, and the EU Member States will work on one standard solution.*

Keywords: *COVID-19, pandemic, VAT gap, VAT fraud, VAT evasion, VAT avoidance, MTIC, Standard Audit File for Tax, split-payment, block-chain, e-invoicing, digitalization, Poland.*

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[1]*Ph.D. Candidate at Wroclaw University of Economics and Indirect Tax Manager at Hewlett Packard Enterprise,* Rafal.Szewczyk@ue.wroc.pl*;*

1. Introduction

Value-Added Tax is a current tax first introduced in France in 1954 as a consumption-type tax. Its spread accelerated in the late 1960s. The reason and the core motivation for adopting the VAT system seem to have differed in each region. Besides being the most efficient revenue-raising tax, it also drove greater economic integration among the Member States of European Communities (Ebrill *et al.*, 2001). Considering both revenue and geographical coverage, VAT has become the central consumption tax since the mid-1980s. Nowadays, 168 countries operate VAT (and its equivalent called goods and service tax, GST), including all members of the European Union (OECD, 2018).

VAT is the main source of budget revenue. According to Eurostat, revenues from VAT was at 7.1% as a share of GDP in 2018 and was the largest source of revenue from taxes on production and import in EU[2], similarly to OECD average (OECD, 2018). Moreover, Hannah Simon and Michelle Harding emphasize in their paper that consumption-type tax is more stable and less volatile than direct taxes (Simon and Harding, 2020). Consumption is also broader and more durable than profits and incomes, argues the European Commission in the Green Paper on the future of VAT (European Commission, 2010). Hence, it is essential to look at ways to strengthen the VAT system, improve its effectiveness and reduce the cost of compliance considering both taxpayers and tax administration.

The current model of VAT is designed to be an additional cost on final consumption. It remains neutral for the business at the production process and at international trade, dependent on specific criteria to be fulfilled. One such criterion is the taxpayer's obligation to submit VAT returns with a frequency where tax payable decreases with tax receivable. This model is exposed to miscalculation and erroneous reporting but also fraudulent behaviour. These factors cause revenue loss that generates the VAT gap, impacting the government's economic policy's objectives.

The critical problem becomes maximizing VAT collection and tackling the system's susceptibility to compliance and fraud. Back in 2010, it was suggested by the European Commission that technological changes may offer new alternative ways of collecting VAT (European Commission, 2010). Even though governments worldwide introduced platforms enabling and mandating organizations to submit their tax returns online, in some cases. The collection model as such has remained substantially unchanged since the introduction of VAT.

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[2]*Eurostat defines Tax-to-GDP ratio as a sum of taxes and net social contributions as a percentage of Gross Domestic Product. This is a tax indicator compiled in a harmonized framework based on the European System of Accounts (ESA 2010), enabling an accurate comparison of the tax systems and tax policies between EU Member States. It is used globally (including annual OECD's reports on Consumption Tax Trends) to express the size of government's tax revenues.*

Introduction of Standard Audit File for Tax by OECD's Forum on Tax Administration was a game-changer for increasing efficiency in tax collection. Moreover, this was an answer for improving compliance and enhancing tax administration following global trends in technology. Additionally, it was designed to facilitate the reduction of compliance costs for business, reduction of administrative expenses for revenue bodies, improving audits carried out by a tax administration, and enhancing accounting data exchange in joint audits (OECD, 2010).

This paper presents the issue of the VAT gap: factors affecting the revenue loss and its scale introduce critical technological changes in VAT reporting and their impact on the revenue collection process. Generally, implementation of new solutions is seen positively, but it is not entirely practical. The article emphasizes that essential factors in this process are to understand the structure of the VAT gap that could be tackled by making tax digital and continuously working on the elements like strong tax administration, suitable penalty system, transparent rules, and taxpayers' knowledge, and awareness. The Author also believes that more robust cooperation between the Member States of the European Union is needed to design a standard tool for VAT reporting. In the Author's opinion, this would increase tax collection control by revenue bodies allowing governments to eliminate fraudulent behavior. This would also offer an absolute reduction of compliance costs for multinational companies and remove burdens for expanding SMEs ' geographical span.

2. Literature Review

The VAT gap is defined as the difference between the expected and actual VAT revenue. In the broader context, it is the difference, caused by various reasons, between the theoretical tax liability according to the local tax legislation (VAT Total Tax Liability, VTTL) and the amount of VAT collected. Besides criminal acts such as non-payment or over-declaring input VAT on purpose, there are also insolvencies, bankruptcies, administrative errors, and tax optimization (European Commission, 2020).

According to the Study and Reports on the VAT Gap in the EU-28 Member States (European Commission, 2020), the VAT Gap in the EU-28 Member States in 2018 was equal to EUR 140 billion. Even though the Member States successfully tackled the VAT gap (it has been the lowest since 2013), the value of the gap is relatively high at 11% of the revenue collected in the EU-28 Member States. This simultaneously impacts the drafting of economic and social policies, as consumption taxes are an essential source of tax revenue. In the literature and reports on VAT gap, the following are the main reasons for the VAT gap in the European Union (European Commission, 2020)[3]:

[3] These factors are considered as directly impacting the revenue loss. VAT gap is a theoretical value that its estimation depends on economic development as well as quality of national

- Tax fraud – taking advantage of the VAT system making illegal profit regularly in an organized and sophisticated way. The most common form of such abuse of the VAT rules is Missing Trader Intra Community (MTIC).
- Tax evasion – the illegal non-payment or underpayment of tax to the revenue bodies. These criminal activities are driven by reporting fictional invoices or not reporting revenue.
- Tax avoidance – minimizing tax liability by creating artificial transactions. Generally, these activities are within the tax law in a single territory.
- Miscalculation – errors in the tax statement. These errors do not have a purposeful character but are instead the result of external factors like complicated and unclear tax regulations or internal: lack of knowledge or due diligence.
- Insolvencies and bankruptcies that are natural reasons for discontinuation of tax payment to the authorities.
- Shadow economy where the transactions are not reported at any stage of adding the value.

The VAT gap is an estimated revenue loss due to criminal and non-purposeful behaviors. Both are the effects of ineffective tax administration as well as unclear tax law. In H. Zidkova and J. Pavel's paper What causes VAT gap? The authors focus on the possible factors driving the VAT gap. They bring up economic factors and characteristics of the VAT system that cause revenue loss. Their analysis revealed that the law making might influence tax evasion or miscalculation. Important conclusions and recommendations for policymakers were to focus on the better collection of VAT rather than increasing VAT rates to increase VAT revenues (Zidkova and Pavel, 2016).

As the above analysis show, the problem of the VAT gap is very complex and has a multi-dimensional nature. VAT revenue loss is driven by various factors which impact could be mitigated by making tax administration more effective and, as a result, improving VAT collection. In the European Union, a tax administration represents resources charged with tax collection, investigation of criminal behaviors, and carrying out tax audits. These activities need to be performed relatively and efficiently with a limited cost for taxpayers and the administration itself. To ensure these aims, revenue authorities need qualified and well-trained personnel and tools that enable the detection of non-compliant behavior.

Due to the pandemic, the VAT gap is expected to increase to EUR 164 billion in 2020 (European Commission). This is the outcome of lower production, global supply chain disturbance, and global restrictions that resulted in the economic slowdown. This has proven that further and deeper cooperation between the EU Member States is needed

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statistics, European Commission emphasizes. Cf. European Commission, 2020, Study and Reports on the VAT Gap in the EU-28 Member States. 2020 Final Report.

to tackle the VAT gap. Besides continuous reforms, two significant aspects should be considered:

(i) development of the standardized and harmonized tool (or set of tools) that would allow to detect of VAT fraud, minimize unforced errors, and secure VAT receivables from companies that have poor financial liquidity or go bankrupt,
(ii) investment in human capital to improve tax knowledge and awareness.

VAT collection system based on the self-assessment of the taxpayers followed later by audits carried out by the tax administration was introduced along with VAT system itself. Even though indirect taxation is seen as an effective and stable mechanism, it is prone to crime and inaccuracies. As technology offers comprehensive solutions through changing, improving, and simplifying VAT compliance and revenue collection, it is currently used by the Member States of the European Union in tax.

There are various technological tools implemented or considered within European Union to tackle VAT fraud. The most common is a Standard Audit File for Tax (SAF-T), the result of Ottawa Taxation Framework Conditions proposed by OECD in cooperation with business. It is defined as the file in a specified format containing critical business information: transactions and ledger postings (OECD, 2003). Initially, SAF-T was designed to allow auditors direct or on-demand access to data in an easily readable format. After its successful implementation by the several Member States, it became the tool replacing the standard VAT return in Poland (as it contains all the necessary information). In theory, SAF-T allows the business and tax administration to control VAT declared at a transaction level resulting in significant time and resource-saving.

In 2018 Spain and Hungary decided to go one step further to implement a real-time reporting system. This solution allows tax administration to receive invoice data in real-time. The information is sent directly from the business' accounting system to the central VAT monitoring database (European Commission, 2010). Real-time reporting is revolutionizing the collection of invoice data by the authorities. It is at an early stage whereby both business and tax administration is exploring the features it provides. This solution might replace several VAT obligations in the future.

Another measure is a split-payment mechanism, whereby the amount paid by the customer to the supplier is divided into the net amount transferred to the regular bank account and the VAT due transferred to a particular VAT account. Funds accumulated on the VAT account belong to the company but can be used only on certain occasions. These are as follows: VAT payment to the supplier for goods and services, VAT payment to the tax office, or to pay the other taxes due. The remaining funds can be withheld only because there are no arrears and no risk of debt to the tax administration of other suppliers. This is the best-known measure to ensure VAT and other taxes are paid to the revenue bodies but is currently limited to the few Member States and the measure's scope.

Blockchain is the technology that could be used in smart contracts to both prevent and detect VAT fraud. It could be used in two areas: a combination with a split-payment mechanism and the Digital Invoice Customs Exchange system. In the first scenario, VAT could be automatically transferred to the tax authorities' bank account instead of receiving and paying by the supplier. In the latter, the buyer, the seller, and the tax authorities are aware of the transaction before a formal VAT invoice is issued. This technology may improve the split-payment mechanism, but the combination with Digital Invoice Customs Exchange would require a more significant investment. Still, it could also significantly impact transactions between two parties by blocking them unreasonably (Merkx and Verbaan, 2019).

Various IT solutions have their advantages and disadvantages, possible improvements, and investments. Although, the main problem lies in the lack of closer cooperation between the EU Member States and joint proposal towards digitalization of VAT reporting. Harmonized EU approach is necessary to prevent high compliance and administrative costs and blocking systems implemented to communicate to each other, allowing controlling taxpayers in a broader geographical scope. Currently, Member States have decided to implement different technological solutions. Even if the same measure is considered (i.e., SAF-T), its scheme differs. As various tools are already explored but still at the early stage, this is the best moment to work on one standard solution achieving its all benefits for business and tax administration.

While planning a standardized and harmonized solution, it should not only be considered a measure to solve VAT fraud but also to reduce burdens to the business and tax administration. Tackling criminal behavior is the primary goal of Member States. However, it should not be considered in isolation. Minimizing revenue loss should be reflected in closing the VAT gap with all its elements. So far, there is only a little experience in estimating the components of the VAT gap. According to some academics, the size of VAT fraud ranges from 20 EUR billion to EUR 94 billion a year, while Europol has estimated it at EUR 100 billion (European Commission, 2018).

Poniatowski (2016) undertook a more complex analysis for Poland for the period 2009-2013. The estimated results proved that VAT fraud (MTIC) stood only 11% of the VAT gap in 2013 compared to 3.8-7.6% in the UK. Although, the main issues were VAT avoidance and evasion (over 35%). On the other hand, miscalculations and errors with not purposeful character stood for around 8%, which is very similar to the estimates from the UK. Other reasons (i.e., bankruptcies and insolvencies) impacted the VAT gap at over 40% (Poniatowski, 2016). To better understand the scale of the problem, further studies on the composition of the VAT gap are needed. They should also include aspects that influence undesirable consequences, i.e., miscalculation.

Looking at the VAT gap structure concludes that the split payment mechanism is an essential solution to prevent tax administration from revenue loss due to bankruptcies and insolvencies. This is possible by freezing funds on the VAT account. Tackling

VAT avoidance and evasion would be possible by improving and investing in SAF-T. The access to SAF-T should be in real-time, which would replace real-time reporting of invoices and the submission of VAT books or VAT returns that could be eventually abolished (Merkx and Verbaan, 2019).

Compliance cost in a narrow sense (cost of tax statement preparation and submission, supervising the implementation of legal changes, and adjusting the company's accounting system to the new requirements) is an integral part of a business' expenses. Even though VAT is a final burden on a customer, it is the business's responsibility to comply and make payments to revenue bodies. The Author believes that the future standardized and harmonized solution should be the effect of close cooperation between banks, businesses, and policymakers. However, the investment should be mainly made by governments. In the Author's view, governments should also support companies – especially SMEs – by offering essential solutions for VAT reporting and payment purposes. The incurred costs would eventually be an investment to close the VAT gap and simplify the system itself.

However, the most critical aspect is considering various solutions communicating with each other or being part of one definitive mechanism designed for VAT collection. Presented technological developments should be improved to the stage where all transactions are correlated in real-time and VAT blocked on a particular bank account. SAF-T and split payment should be explored in depth. The latter mainly extends the scope to B2B transactions and customer transactions, ensuring that it does not disturb the cash flow. Complete correlation of transactions would be possible by considering a central platform for issuing electronic invoices. Any invoice issued by the supplier would be sent to a powerful platform operated by the tax administration. Authentication of the transaction by the buyer would not additionally allow impersonation of other companies. Payment for goods and services could also be executed through the platform and the amount automatically divided into taxable base and VAT.

Thanks to artificial intelligence, any criminal behavior could be brought to a minimum. On the other hand, any miscalculation could be immediately detected. However, the information itself must be received by the qualified personnel of the tax administration to decide on further action.

3. Discussion

In its Study and Reports on the VAT gap, European Commission proves a significant decrease in the VAT gap in Poland from 2015 to 2018. According to the report, in 2018, Poland recorded the decline of the VAT gap of 14.8pp, down to 9.9% (EUR 4.45 billion) compared to 24.7% (EUR 9.77 billion) in 2015. It is important to emphasize that it is lower than the average in European Union that is EUR 5 billion, 11% in relative terms (European Commission, 2020). In the same report, the European

Commission forecasted the trend and expected the VAT gap to decrease slightly down to 9.7% in 2019.

The success of tackling the VAT gap in Poland resulted from a whole range of technological and legal solutions. In 2016, the Polish government introduced JPK (pl. Jednolity Plik Kontrolny) that is SAF-T equivalent. It started with big enterprises and was extended to small and medium-sized companies in 2017 – at that time, all 1.6 million taxpayers in Poland had to submit them. In October 2020, JPK completely replaced regular monthly VAT returns. Thanks to the digitalization of VAT returns and analytical tools, Polish tax authorities can more effectively detect any fraudulent behavior and report mistakes. Before introducing SAF-T, it was challenging considering 1.6 million taxable persons filing 19.2 million VAT returns and only 4 thousand officers (Szymanek, 2019). 4.8 thousand VAT returns per one officer come down to validation of the primary and common errors in the form instead detecting any unjustified invoices.

In January 2018, the Polish government established STIR (pl. System Teleinformatycznej Informacji Rozliczeniowej) to tackle tax fraud. In practice, STIR is an innovative data exchange tool between Polish tax authorities and the banking sector (in other words, it allows Polish tax authorities to receive detailed information on companies' bank accounts). STIR allows Polish tax authorities to identify fictitious transactions and temporarily block the account (Deloitte, 2020).

In July 2018, a split payment mechanism entered into force but applied voluntarily and was limited to B2B transactions only. Even though until October 2019 it was considered as pilotage, 16.3% of VAT payable was allocated to a particular VAT bank account. Polish authorities also encouraged companies to use that mechanism by the acceleration of VAT refund. Since November 2019, a split payment mechanism became obligatory for invoices exceeding PLN 15,000 for the goods or services listed in Annex 15 of the Polish VAT Act (closed catalog of goods and services imposed on fraudulent behavior). It results in a significant increase of VAT settled on VAT bank account: in August 2020, it was 55.7% of the total VAT payable declared by Polish taxpayers (Sarnowski and Salera, 2020).

As of September 1st, 2019, the Ministry of Finance in Poland published the Whitelist of Taxpayers that is relevant and supportive of the technological tools implemented. Besides NIP (Polish Tax Id) and the status of VAT registration, the Whitelist contains information like the name and address of the company and a bank account number. The list includes all bank account numbers reported by taxpayers to the tax office. Companies are obligated to verify their vendors and pay for goods and services only to the bank account number presented on the Whitelist. Not following this procedure imposes sanctions on companies (i.e., being jointly liable for VAT of their vendors).
All technological solutions are supported by advanced analytical tools that quickly detect mistakes in the VAT reporting and reduce the life cycle of carousel frauds from several months down to several weeks. They also make the fraudulent behavior less

attractive, constrict money laundering and let the tax administration penalize in compliance.

However, due to the COVID-19 pandemic, this positive trend got disturbed, and it is expected that the VAT gap in Poland could grow up to 14.5% and be above the EU's average. The main factors that impact this change would be the higher contribution of the informal economy and problems of the companies with liquidity because of lower business activity due to global restrictions (CASE)[4]. The latter is proven by the latest data on VAT arrears published by the Polish Government: in 2019, it was PLN 94.2 billion (EUR 20.8 billion), while in 2020, it increased to PLN 95.2 billion (EUR 21.1 billion). Another problem is receivables that become overdue – where taxpayers file their VAT returns but do not pay VAT. Statistics show that PLN 4.7 billion (EUR 1.04 billion) became overdue in 2019, while in 2020, it grew up to PLN 7 billion (EUR 1.55 billion).

Uncollectible VAT receivables could be tackled in the short term by extending the split-payment mechanism to all products and services without any threshold. This is currently considered by the Polish Ministry of Finance that applied for approval from the European Commission to implement such reform. As emphasized before, this change would negatively impact taxpayers' cash flow by freezing their input VAT on the particular bank account. It will become problematic for companies that expect VAT refund – considering this Polish Ministry of Finance need to additionally develop a policy that minimizes this difficulty, i.e., by fast and effective way of releasing VAT funds from a particular bank account that currently takes up to 60 days. This could be allowed automatically using an online banking platform when obligatory e-invoicing is implemented and on the condition that taxpayers do not have any arrears towards tax administration and their vendors. Otherwise, funds would remain blocked until liabilities are paid.

The most complex solution that could take Poland close to the correlation of transactions in real-time and strengthen control over the VAT system is e-invoicing. The introduction of KSeF (pl. Krajowy System e-Faktur) is planned as obligatory for all taxpayers in 2023. However, it will be available for volunteers from the 4th quarter of 2021. It will be like the solution implemented in Italy back in 2019. The primary purpose of KSeF is to implement structured invoicing that is the only legally accepted account document. The supplier will send invoices in a predefined format to the government platform. Customers, as well as tax administration, will have access to the invoices directly through the platform. Moreover, KSeF is considered to perform several functions as a system for issuing, sending, receiving, validating, analyzing, controlling, and archiving invoices. Besides benefits offered by the Polish Ministry of

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[4]*Official report, with detailed analysis for 2019, is expected to be published in September 2021. Currently, VAT gap for 2019 is estimated based on simplified methods due to the delay in data availability.*

Finance to encourage taxpayers to use KSeF (i.e., VAT refund within 40 days compared to current 60 days), there are general advantages:

(i) authentication, integrity, and readiness of invoices,
(ii) direct access to the invoices for supplier, customer, and tax administration,
(iii) archiving for 10 years.[5]

On the other hand, the informal sector could be limited by undertaking long-term measures to improve human capital in Poland. This could be achieved by enhancing the economic knowledge and awareness of Polish citizens. This should start with education reform with the best practices from countries like Finland or Sweden, where the grey economy makes up a less significant portion of the VAT gap. In this area, further analysis of human capital to economic awareness is needed to identify which aspects should be considered.

4. Conclusion

The main driver of VAT fraud in the European Union is the endemic weakness of the current transitional VAT system resulting from the break in the fractioned VAT collection, commonly known as the MTIC fraud scheme (European Commission, 2017). However, as some research proves, the main issues impacting VAT revenues are VAT avoidance, evasion, and miscalculations or errors with no purposeful character. It means that the VAT gap can be effectively tackled only if its composition is considered.

Digitalization of the VAT collection system is the main aim of EU Member States. Countries have decided to establish various tools and mechanisms to eliminate the VAT gap. However, it will not be effective until there is one standard solution for European Union. In its Green Paper on the future of VAT, European Commission explored four models to improve the VAT system: split-payment, central VAT monitoring database, SAF-T, and certification of taxable person's VAT compliance process and internal controls. It needs to be emphasized that each solution should not be considered in isolation. More importantly, they should be explored as a complementary tool.

Poland is the only country within European Union that decided completely transform and digitalize VAT reporting. Polish Ministry of Finance has implemented various solutions and tools that brought positive effects in tackling the VAT gap. Poland offers closer cooperation with the other EU Member States, and this experience should be considered to stop fraudulent practices. These technologies bring opportunities and

[5] *Currently, the project of e-invoicing in Poland is under public consultation. All information included in the article comes from the project of Ministry of Finance. As some details might still change, the core of the solution is expected to be implemented in presented form.*

challenges that should be worked out by close cooperation between banks, businesses, and policymakers. Currently, the main problem is a disturbance of the companies' cash flow. No solution cannot impact the liquidity of the taxpayers.

Although the technology itself cannot resolve all the problems and implementation of technology results in many positive effects, it cannot be regarded as a panacea for all evil. The tools implemented by the Member States allow to detect of errors and fraudulent behavior proactively, but it is the qualified personnel of tax administration to decide on further action. Strong tax administration, a suitable penalty system, transparent rules, taxpayers' knowledge, and awareness are vital aspects of an effective VAT system.

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