

Value Added Tax Policy Design for the Platform Economy: Digital Reporting and Fraud Mitigation within the EU ViDA Framework

Abstract



The platform economy heightens the risk of VAT noncompliance by dispersing taxable activities among numerous micro-suppliers, increasing cross-border place-of-supply complexity, and expanding opportunities for evasion due to reporting delays and fragmented data. The European Union's VAT in the Digital Age (ViDA) reforms address these risks through a data-centric approach. These reforms introduce harmonised digital reporting, structured e-invoicing for intra-EU B2B transactions, targeted platform deemed-supplier rules in specific sectors, and enhanced administrative cooperation. This paper presents a policy design prioritising transferability for small and candidate European economies, with a focus on practical implementation under capacity constraints. Through a structured instrument-to-mechanism-to-KPI mapping, the study defines platform VAT risk categories, constructs a closed-loop compliance system, and outlines a phased implementation roadmap. A comparative case study examines Hungary's real-time invoice reporting regime versus periodic reporting, demonstrating measurable improvements in detection speed and governance, while also highlighting challenges related to validation and SME enablement. Scenario-based present–future comparisons (not forecasts) indicate that phased digital reporting and platform controls can plausibly reduce compliance gaps and strengthen enforcement. Achieving these outcomes requires embedding interoperability, proportionality, and governance safeguards into system design.

Keywords: platform economy; VAT; ViDA; digital reporting requirements; e-invoicing; deemed supplier; VAT fraud; compliance analytics; administrative cooperation; SMEs

1. Introduction

Value-added tax (VAT) is a principal revenue source across Europe and neighboring economies. Its effectiveness relies on timely, verifiable transaction data that enable administrations to reconcile sales and purchases, identify inconsistencies, and enforce liabilities efficiently. Traditional VAT control models depend on periodic returns and retrospective audits, which introduce information delays. These delays can be exploited through under-declaration, misclassification, and structured fraud strategies that benefit from weak transaction matching and slow detection. The platform economy fundamentally alters this information environment. Online marketplaces, accommodation platforms, ride-hailing systems, and app-mediated services generate high-frequency microtransactions and consolidate operational data, such as orders, payments, cancellations, and supplier identity attributes, within platforms. However, VAT liabilities often remain legally dispersed among numerous suppliers, many of whom are micro-entrepreneurs or occasional sellers with limited compliance capacity. This combination of centralized information and decentralized liability creates an asymmetry: administrations may receive incomplete or delayed reporting, while platforms possess granular, near-real-time data. Three VAT challenges are intensified in platform-mediated markets. First, **registration and identification risk** increases as suppliers may be unregistered, short-lived, or difficult to verify across borders. Second, **place-of-supply and cross-border risk** rises because platform transactions scale remote supplies and complicate jurisdictional allocation, particularly for services and mixed fulfillment models. Third, **reporting latency risk** increases because periodic reporting creates a window during which anomalies and noncompliance remain undetected, reducing deterrence and increasing reliance on resource-intensive retrospective audits. The EU's **VAT in the Digital Age (ViDA)** legal package, adopted on 11 March 2025 and published in the Official Journal, represents a significant policy response to these structural issues by modernizing reporting, targeting platform-related compliance challenges, and strengthening administrative cooperation. The package includes the **Council Directive (EU) 2025/516**, the **Council Regulation (EU) 2025/517**, and the **Council Implementing Regulation (EU) 2025/518**. Although ViDA is EU legislation, its architecture is relevant for small and candidate economies (such as North Macedonia, Kosovo, Albania, and neighboring jurisdictions) for at least three reasons. First, these economies trade extensively with EU markets, so regulatory and data interoperability expectations can be transmitted through supply chains and platforms. Second, digital reporting and structured invoicing can reduce domestic compliance gaps regardless of EU membership. Third, platform-based compliance mechanisms can reduce enforcement costs by focusing control on high-capacity intermediaries rather than dispersed micro-suppliers, which aligns with OECD guidance on platform involvement in VAT/GST collection. OECD

Research questions

RQ1: Which Value-Added Tax (VAT) compliance and fraud mechanisms are most intensified by platform intermediation?

RQ2: Which VAT in the Digital Age (ViDA) mechanisms are most transferable to small and candidate economies under capacity constraints?

RQ3: What phased policy design can minimise compliance burdens while maximising fraud reduction and revenue integrity?

Contribution

This paper develops a **transferability-oriented policy framework** that operationalises ViDA principles into: a platform VAT risk taxonomy;

1. a closed-loop digital reporting and enforcement architecture (Figure 1);
2. measurable KPIs and an implementation roadmap; and
3. a comparative mini-case (Hungary RTIR vs periodic baseline) illustrating operational implications and governance trade-offs.

2. Materials and Methods

2.1 Research design

This study employs a qualitative, policy-analytic approach with a focus on operationalisation aligned to standard-setting bodies. It includes:

- **Legal–institutional synthesis** of ViDA’s core instruments and stated objectives.
- **Organisation for Economic Co-operation and Development (OECD) policy guidance synthesis** on the role of digital platforms in VAT/GST collection and reporting
- **Comparative operational evidence** from Hungary’s RTIR model (public technical and institutional documentation),
- **The compliance and enforcement literature** establishes that information and third-party trails strengthen VAT self-enforcement and deterrence.

2.2 Instrument-to-mechanism-to-KPI mapping

Each instrument is analysed across four dimensions, with measurable KPIs proposed:

1. Information timeliness & granularity

- KPI examples: reporting latency (hours/days), completeness rate (%), structured-field validity (%)

2. Liability allocation & enforceability

- KPI examples: platform-covered transaction share (%), micro-supplier compliance burden proxy (time/cost per invoice), Small and Medium-sized Enterprise (SME) adoption rate (%)

3. Interoperability & scalability

- KPI examples: API integration coverage (%), standard conformance rate (%), cross-platform identifier match rate (%)

4. Cost & proportionality

- KPI examples: SME adoption rate (%), support tickets per 1,000 taxpayers, average correction-cycle duration (days)

2.3 Platform VAT risk taxonomy (operational definitions)

The analysis uses five risk domains:

- **Registration risk:** suppliers operate without VAT registration where required or misuse their registration status.
- **Reporting risk:** under-declaration or non-declaration of platform turnover.
- **Cross-border risk:** place-of-supply errors; failure to remit destination VAT or apply the correct scheme.
- **Fraud risk:** structured strategies exploiting delayed detection and weak matching (including missing-trader-type behaviours where applicable).
- **Data quality risk:** inconsistent identifiers, missing structured fields, duplicates, or late corrections.

2.4 Scenario approach for present–future comparison

This paper employs scenario comparison rather than prediction, as country-level causal forecasting requires administrative microdata and econometric identification. A baseline periodic-reporting scenario is compared to a phased adoption scenario to illustrate directional implications. The scenario is explicitly presented as illustrative, not as a forecast.

2.5 Limitations

The study does not use econometric estimates of jurisdiction-specific VAT gaps. Instead, it focuses on mechanism-based policy design, operational KPIs, and implementation steps. Comparative mini-case evidence shows feasibility and governance points, without claiming single-cause macro effects.

3. Results

3.0 Summary of results

Four results emerge:

1. A ViDA-style architecture reduces platform VAT risk primarily by decreasing **information latency** and standardizing **transaction accuracy**.
2. Platform-deemed-supplier rules can materially increase collection efficiency when targeted and governed, consistent with OECD guidance.
3. Hungary’s RTIR illustrates how near-real-time reporting transforms operational controls, but also introduces validation governance challenges.
4. Present–future scenario compComparisons between present and future scenarios indicate that phased implementation can reduce compliance gaps while managing the burden on small and medium-sized enterprises (SMEs).irements and fraud mitigation in platform markets

Digital reporting requirements (DRR) shift VAT control from periodic summaries to detailed, transaction-level oversight. Administrations receive structured records closer to the taxable event, allowing automated checks, anomaly detection, and prompt intervention. Research indicates that transaction-level data and third-party information help deter fraud and encourage VAT compliance. ViDA is designed to modernise VAT reporting and address the fragmentation caused by different national systems. It also strengthens administrative cooperation, which is vital for cross-border platform transactions and supply chains.

In platform contexts, DRR supports reconciliation of three data layers:

- platform transactional logs (order/payment/cancellation);
- supplier invoicing records; and
- VAT declarations or scheme filings.

This improves detection of abnormal turnover patterns, repeated inconsistencies, and payment–tax mismatches. However, the impact depends on governance: stable specifications, validation rules, security, and correction workflows. When systems are introduced without SME enablement, compliance costs may rise, leading to avoidance rather than compliance.

Result 3.1: For small and candidate economies, DRR should be sequenced: start with platform-mediated high-risk sectors and large taxpayers; then extend the scope once standards and tooling are stable.

3.1.1 Platform-deemed-supplier liability and collection efficiency

OECD guidance highlights that platforms can serve as VAT/GST collection and reporting points because they are technically capable and already handle key transaction functions. ViDA also addresses platform-economy challenges by imposing targeted obligations (including deemed-supplier logic in specified sectors) and adjusting information requirements. The central compliance logic is enforceability: thousands of micro-suppliers are difficult to monitor individually, whereas platforms with consolidated data and payment controls can implement scalable controls. This can reduce micro-supplier administrative burden and improve collection efficiency. Nevertheless, deemed-supplier rules require proportionality and legal clarity to avoid overreach, disputes, and unintended market effects.

Result 3.1.1: A targeted deemed-supplier approach is most defensible where platform penetration is high, non-compliance is persistent, and auditability is strong from platform data.

3.2 Figures and Tables

Figure 1 (Mandatory; vector)

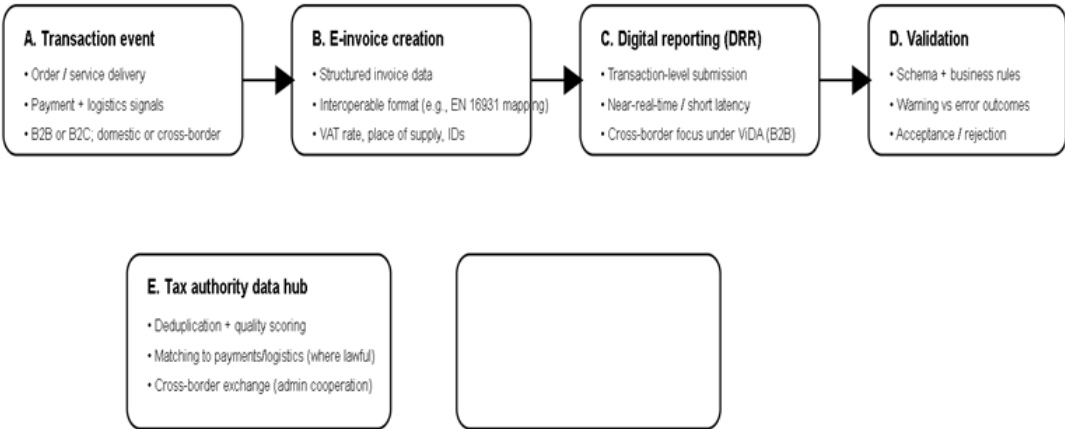


Figure 1. ViDA-inspired VAT compliance mechanism for platform transactions (B2B/B2C and cross-border capable closed loop).

Table 1 (Mandatory)

Table 1. Policy instruments for platform VAT compliance: mechanisms, expected impact, and governance risks

Instrument	Main mechanism	Expected compliance impact	Primary cost driver	Principal governance risk
Digital reporting (DRR)	Transaction-level data transmission to authority	High	IT integration; data mapping	Complexity; data-quality failures; cybersecurity
Structured e-invoicing	Standardised invoice creation + validation	High	SME onboarding; software costs	Exclusion of small suppliers if tools are costly
Deemed-supplier rules	Shift liability to platform (targeted sectors)	Very high (targeted)	Platform governance & controls	Overreach; disputes; market distortions
Enhanced admin cooperation	Faster cross-border information exchange	Medium–High	Inter-agency coordination	Misalignment of data semantics; privacy constraints
Periodic returns only	Ex post reconciliation	Low	Audit capacity	High latency; higher fraud exposure

The adopted legal package supports alignment with ViDA’s reporting, platform, and cooperation pillars (EUR-Lex+2EUR-Lex+2).

3.3 Comparative mini-case: Hungary RTIR vs baseline periodic reporting (operational concretes)

Hungary serves as a widely cited operational reference for real-time invoice reporting. The European Commission’s eInvoicing Country Fact Sheet describes a centralized RTIR model, introduced in **July 2018**, which mandates live electronic invoice reporting to address VAT fraud. Both the Hungarian tax authority (NAV) document the phased expansion: the reporting obligation commenced on **1 July 2018** and was subsequently extended in 2020 and 2021, resulting in comprehensive coverage of invoices issued by Hungarian taxpayers.

Operational comparison (metrics and measurable definitions)

To facilitate scientific comparison across jurisdictions, this paper specifies **five operational key performance indicators (KPIs)**. In cases where aggregate performance values are not published, these metrics can be derived from administrative or platform logs.

KPI 1: Detection Latency (hours or days)

- Under RTIR, immediate transmission of invoice data enables prompt identification of issues shortly after invoice issuance.
- **In the periodic baseline model, visibility of issues typically arises only after monthly or quarterly submission and subsequent review.**
It is expected that RTIR reduces effective detection latency from several weeks to a matter of hours or days, thereby enabling earlier inte
KPI 2: Validation Rejection Rate (percentage). This metric represents the proportion of incorrect submissions relative to all submissions within a defined period.a set time.
- Hungary’s RTIR employs structured data and systematic validations. NAV reports ongoing evolution of data structures since 2018, indicating continuous validation and schema governance. It is anticipated that initial rejection rates may be significant during the onboarding phase, but will decline as system stability and taxpayer familiarity increase.

KPI 3: Correction Cycle Duration (days)

Defined as the median time from validation error notification to corrected submission acceptance.**RTIR:** Immediate validation is expected to support shorter correction cycles, with errors able to be addressed soon after notification.s.**Periodic baseline:** Error detection tends to occur after considerable delay, typically via audit or desk review, so correction cycles are expected to be much longer.s.

KPI 4: Audit Yield Direction (qualitative and ratio-based assessment)

This KPI is defined as the amount of assessed or collected VAT per audit hour or per selected case. Evidence suggests that enhanced information trails improve targeting and deterrence in VAT systems; therefore, audit yield is expected to increase following RTIR implementation. It is important to note that this paper does not assert that RTIR alone causes reductions in the macro VAT gap; rather, audit yield is considered an operational outcome to be measured before and after implementation. NAV documents indicate staged coverage extensions after 2018, particularly in 2020 and 2021, resulting in broad invoice coverage. It is expected that coverage will continue to expand as implementation phases progress. **The policy implication is that** phased scope expansion is feasible, provided that stable data schemas, robust testing environments, and comprehensive taxpayer support are maintained.

Table 2 (added)

Table 2. Hungary RTIR vs periodic baseline: operational differences and KPI measurement plan

KPI	RTIR (Hungary reference)	Periodic baseline	How to measure
Detection latency	Near-real-time transmission	Weeks–months	Timestamp difference: issuance vs authority visibility
Validation rejection rate	Structured validations; evolving schema	Often no immediate validation	Invalid/total submissions in API logs
Correction cycle duration	Faster error feedback loop	Later detection (audit/desk review)	Time from error to accepted correction
Audit yield direction	Better targeting expected via richer data (mechanism evidence)	Lower targeting precision	VAT assessed/collected per audit hour
Scope expansion	Phased expansion after 2018	Static periodic scope	Coverage % by taxpayer class/sector

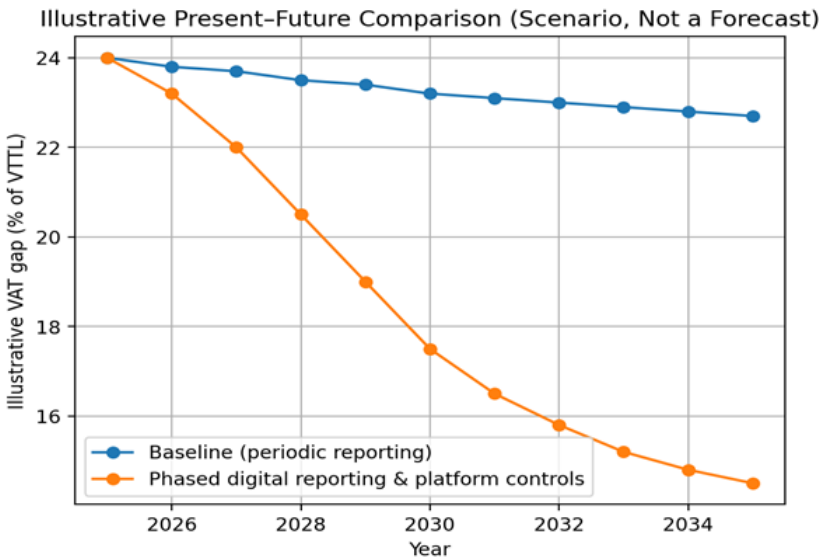
3.4 Present–future numerical comparison (scenario; not forecast)

To address the requirement for a numerical present–future comparison while avoiding overstatement of causality, this section introduces a scenario analysis that contrasts the following cases:

- **Baseline scenario:** Periodic reporting remains the dominant approach, with only incremental improvements implemented.
- **Phased digital scenario:** platform reporting + targeted deemed-supplier rules + stepwise DRR.

Figure 2 (scenario plot)

Figure 2. Illustrative present–future comparison (scenario, not forecast): baseline periodic reporting vs phased digital reporting and platform controls (2025–2035).



In the phased digital scenario, the compliance gap narrows more rapidly than in the baseline scenario. This outcome is attributable to reduced detection latency, improved data matching, and greater enforceability achieved through platform mediation. Calibration of the scenario illustration with administrative data is necessary during pilot implementations.

Table 3 (added; scenario values)

Year	Baseline_scenario_pct	Phased_digital_reporting_scenario_pct
2025	24	24
2026	23.8	23.2
2027	23.7	22
2028	23.5	20.5
2029	23.4	19
2030	23.2	17.5
2031	23.1	16.5
2032	23	15.8
2033	22.9	15.2
2034	22.8	14.8
2035	22.7	14.5

Table 3. Scenario values used for Figure 2 (percent; illustrative, non-forecast)

(Values are included in the CSV file for reproducibility and should be replaced with pilot-calibrated values when administrative evidence becomes available.)

4. Discussion

4.1 Transferability of ViDA principles beyond the EU

The ViDA legal package constitutes a major policy advancement by promoting standardized, transaction-level reporting and fostering enhanced cooperation to reduce fragmentation and improve fraud resilience. For small and candidate economies, full replication of the legal framework may not be necessary; however, the underlying principles of timely data, standardization, and enforceability remain both transferable and beneficial. Successful transferability requires an interoperability strategy that reduces custom integration costs and enables various accounting and platform providers to connect through standard APIs.

4.2 Governance and proportionality (SMEs)

Digital VAT reforms may fail if they impose excessive costs on SMEs and micro-suppliers. The deemed-supplier model can alleviate this burden by embedding VAT calculation and remittance within platform workflows, consistent with OECD design guidance. Nevertheless, strong governance is essential, encompassing transparent liability definitions, auditable records, stable validation criteria, accessible tools, and reasonable transitional provisions.

4.3 What the Hungary RTIR mini-case imHungary’s RTIR demonstrates the practicality of live reporting through a phased expansion approach. European Commission¹ The experience further shows that schema and validation processes are subject to continuous evolution and should be managed as ongoing governance activities rather than as a one-time IT implementation. For jurisdictions considering adoption, it is advisable to incorporate correction-cycle governance into system design, including clear error taxonomies, defined resubmission periods, user dashboards, and dedicated helpdesk support. k support—is recommended.

4.4 Implementation roadmap (staged adoption for small/candidate economies)

Phase 1 (0–12 months): legal basis and platform reporting pilots

- Define minimum platform dataset; mandate retention and audit rights.
- Launch pilots with major platforms (marketplaces, accommodation, ride-hailing).
- Provide optional free/low-cost invoicing and reporting tools for SMEs.

Phase 2 (12–30 months): targeted DRR and sectoral deemed-supplier rules

- Mandatory DRR for platform-mediated high-risk sectors and large taxpayers.
- Introduce targeted deemed-supplier rules in clearly defined sectors with strong auditability.
- Establish KPI dashboards: latency, rejection rate, correction-cycle duration, mismatch rates.

Phase 3 (30+ months): scale interoperability and analytics maturity

- Broaden DRR scope based on pilot evidence; stabilise standards and validation rules.
- Expand automated matching and anomaly detection capabilities. Platform intermediation complicates VAT compliance by placing transaction data with private intermediaries and distributing legal responsibilities among numerous micro-suppliers. ViDA establishes a clear benchmark for modernizing VAT controls through digital, transaction-level reporting, platform-based compliance tools, and enhanced administrative cooperation. OECD guidance endorses the use of platforms as effective mechanisms for VAT/GST collection and reporting, provided that legal scope and governance are robust. OECD This paper introduces a framework emphasizing transferability, including a platform VAT risk taxonomy, a closed-loop compliance model (see Figure 1), measurable KPIs, and a phased implementation plan. The Hungary RTIR case demonstrates that near-real-time reporting accelerates detection and correction, while also highlighting the importance of strong validation governance and SME support. Future research should assess the impact of these reforms using administrative data and phased rollouts, such as difference-in-differences methods, and should link operational KPIs to audit outcomes and changes in compliance gaps.

6. Patents

No patents are claimed. This work provides a policy design and operational measurement framework based on public legal documents and international guidance. Any patentable innovations would come from later proprietary projects, such as real-time invoice validation engines, platform-to-tax authority API gateways with privacy features, or advanced risk analytics modules. These are not covered in this academic paper.

Supplementary Materials

Supplementary materials include: (i) a vector version of Figure 1; (ii) the scenario dataset for Figure 2; (iii) a minimum platform reporting dataset specification; (iv) an operational KPI dictionary with formulas for latency, rejection rate, correction-cycle duration, mismatch rate, and audit yield per hour; and (v) a step-by-step adoption checklist for tax authorities and platform operators.

Author Contributions

E.I.: conceptualisation; methodology; legal and policy analysis of ViDA; synthesis of OECD platform VAT guidance; comparative mini-case design; development of KPI framework and adoption roadmap; writing—original draft; writing—review and editing; visualisation design for figures and tables; final approval of the manuscript.

Funding

This research received no external funding.

Institutional Review Board Statement

Not applicable. The study is based on publicly available legal texts, institutional publications, and published research. No human participants, interviews, or personal datasets were used.

Informed Consent Statement

Not applicable.

Acknowledgments

The author thanks the European Union institutions for publishing the ViDA legal package and related explanatory materials, and acknowledges the OECD for providing actionable guidance on platform roles in VAT/GST collection. Appreciation is also extended to Hungary’s tax administration for making technical documentation publicly available, thereby facilitating comparative operational analysis.

Conflicts of Interest

The author declares no conflicts of interest.

Appendix A

Minimum platform reporting dataset (illustrative): platform ID; supplier ID and VAT registration status; transaction timestamp; gross amount; VAT amount (if charged); service/product category; location indicator(s) for place-of-supply assessment; payment reference; cancellation/adjustment flags; invoice reference (if issued); and platform settlement status. Data minimisation principles should apply, with defined retention periods and audit access rules.

Appendix B

KPI dictionary (core measures):

- Reporting latency = authority visibility timestamp – invoice issuance timestamp.
- Validation rejection rate = invalid submissions ÷ total submissions per period.
- Correction-cycle duration = median(accepted correction timestamp – first error timestamp).
- Mismatch rate = unmatched transactions ÷ total reported transactions.
- Audit yield per hour = assessed/collected VAT ÷ audit staff hours for selected cases.

References

1. Accountancy Europe. (2025). *VAT and the Digital Age (ViDA): Factsheet*.
2. Agha, A., & Haughton, J. (1996). Designing VAT systems: Some efficiency considerations. *Review of Economics and Statistics*, 78(2), 303–308.
3. Allingham, M. G., & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economics*, 1(3–4), 323–338.
4. European Commission. (2020). *VAT gap in the European Union: Methodology report*.
5. European Commission. (2022). *VAT in the Digital Age (ViDA): Proposal package and impact assessment*.
6. European Commission. (2023). *Hungary eInvoicing country sheet*. Digital Building Blocks.
7. European Commission. (2025). *VAT gap in Europe: Report 2025*. Directorate-General for Taxation and Customs Union.
8. European Commission. (2025). *Report on tax gaps supporting competitiveness and fairer tax systems*.
9. Council of the European Union. (2025). *Council Directive (EU) 2025/516 amending Directive 2006/112/EC as regards VAT rules for the digital age*.
10. Council of the European Union. (2025). *Council Regulation (EU) 2025/517 amending Regulation (EU) No 904/2010 as regards VAT administrative cooperation arrangements*.
11. Council of the European Union. (2025). *Council Implementing Regulation (EU) 2025/518 amending Implementing Regulation (EU) No 282/2011 on VAT information requirements*.
12. Organisation for Economic Co-operation and Development. (2017). *International VAT/GST guidelines*. OECD Publishing.
13. Organisation for Economic Co-operation and Development. (2019). *The role of digital platforms in the collection of VAT/GST on online sales*. OECD Publishing.
14. Organisation for Economic Co-operation and Development. (2020). *Tax administration 2020: Comparative information on OECD and other advanced and emerging economies*. OECD Publishing.

15. Pomeranz, D. (2015). No taxation without information: Deterrence and self-enforcement in the value-added tax. *American Economic Review*, 105(8), 2539–2569.
16. Slemrod, J. (2019). Tax compliance and enforcement. *Journal of Economic Literature*, 57(4), 904–954.
17. Bird, R. (2015). Improving tax administration in developing countries. *Journal of Tax Administration*, 1(1), 23–45.
18. Keen, M., & Slemrod, J. (2021). *Rebellion, rascals, and revenue: Tax follies and wisdom through the ages*. Princeton University Press.
19. Hungarian Tax and Customs Administration. (2020). *Real-time invoice reporting in Hungary*.
20. Avalara. (n.d.). *Hungary real-time invoice reporting (RTIR) guide*.
21. International Bureau of Fiscal Documentation. (2025). *VAT in the Digital Age (ViDA): Overview and implementation timeline (2025–2035)*.
22. International Organization for Standardization. (2019). *Electronic invoicing: Standard elements*.
23. World Bank. (2021). *GovTech and digital public infrastructure: Lessons for revenue administrations*.
24. International Monetary Fund. (2019). *Fintech: The experience so far*.
25. European Commission. (2025). *VAT gap portal and analytical overview*.
26. eucrim. (2025). *New legislation: VAT in the Digital Age*.
27. VATUpdate. (2025). *ViDA reforms: VAT administrative cooperation arrangements*.
28. VATUpdate. (2025). *ViDA reforms: Changes to VAT implementing regulations*.
29. SPS Commerce. (2024). *Hungary and e-invoicing: Real-time reporting insights*.
30. Oxford University Press. (2023). The role of platforms in the collection of consumption taxes in the digital economy. In *Consumption taxation in the digital economy*.
31. Rexhepi, B. R., Rexhepii, F. G., Xhaferi, B., Xhaferi, S., & Berisha, B. I. (2024). Financial accounting management: A case of Ege Furniture in Kosovo. *Quality – Access to Success*, 25(200), 77–89.
32. Daci, E., & Rexhepi, B. R. (2024). The role of management in microfinance institutions in Kosovo: Case study of the Dukagjini region. *Quality – Access to Success*, 25(202), 207–213.