From Fiscal Documents to Fiscal Transactions

A policy study on payment-linked transaction visibility in VAT-control systems

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Contents

Acronyms and Key Terms

This section provides the key acronyms and analytical terms used in this study. A broader terminology base is maintained in the Global Fiscalisation Terminology Reference, Version 1.0, 2026, fiscalisations.com/gftr, which provides country-specific and cross-jurisdictional fiscalisation, e-invoicing and digital tax-compliance terminology.

Term	Meaning
B2B	Business-to-business
B2C	Business-to-consumer
ECR	Electronic Cash Register
OCR	Online Cash Register
POS	Point of Sale
PSP	Payment Service Provider
VAT	Value Added Tax
RT	Registratore Telematico – Italian electronic cash register used to issue the commercial document, securely store daily sales data and transmit the required transaction data to the Italian Revenue Agency.
EftPOS	Electronic Funds Transfer at Point of Sale, electronic payment acceptance system or terminal used to process card-based and other electronic payments at the point of sale.
Sales suppression	Deliberate omission, under-recording, deletion or manipulation of taxable sales
Payment-linked fiscal reporting	Fiscal reporting model where the fiscal record is connected to independent or separately verifiable settlement evidence, usually through an electronic-payment, payment-service or settlement trace.
Settlement evidence	Independent or separately verifiable evidence that the consideration recorded in a fiscal document was actually paid, transferred, redeemed, offset or otherwise settled, regardless of the payment method used.
Suppression exposure	The point or condition where a taxable transaction can disappear from the fiscal chain

Executive argument

VAT is charged on taxable transactions, but many fiscal-control systems still treat documents as the primary control object, including receipts, invoices, fiscal records, reporting payloads and VAT returns. As a result, the seller's administrative record often becomes the main evidence of the transaction, even though the underlying economic event exists independently of whether that record is created, transmitted or checked. The structural weakness is that the tax authority must rely on reported information whose accuracy, completeness and connection to the monetary event are difficult to verify independently at the point of transaction. The fiscal relevance of this gap is reflected in the European Commission 2025 VAT Gap analysis, which estimates that the European Union collected EUR 1,223 billion in VAT revenue in 2023, while the VAT compliance gap reached EUR 128 billion, equal to 9.5% of VAT Total Tax Liability.[1]

The central problem is sales suppression. Sales suppression means the intentional exclusion, under-recording, deletion or manipulation of taxable sales so that reported turnover is lower than real economic activity. It can occur before the sale is entered into the Point-of-Sale (POS) system, inside the ECR, during reporting, or through software that deletes or alters sales records. The common result is transaction invisibility, where the taxable event exists while the fiscal trace is missing, weakened or disconnected from the monetary event.

Fiscalisation has followed a natural technology-development path. It began by protecting local sales records through certified devices, fiscal memories and secure storage, then evolved towards online reporting, where OCRs, e-invoicing platforms and reporting interfaces move recorded data closer to the tax authority. A potential next evolutionary step is to move fiscal visibility closer to the monetary event itself. Electronic payment and other traceable settlement forms may create independent or separately verifiable settlement evidence, and when that evidence is connected to the fiscal record and supported by consumer incentives, the transaction becomes visible through more than the taxpayer-prepared fiscal document alone. This reduces the space for pre-document suppression and moves fiscal control closer to the point where taxable economic value is exchanged, recorded and independently evidenced.

The policy implication is clear, even if the reform route remains country specific. A credible design path is to move traditional cash-register and POS-based fiscal control towards online-capable, payment-aware and consumer-supported transaction visibility. The fiscal document remains the structured VAT record, while the electronic settlement trace provides independent evidence of value transfer. Consumer incentives reinforce the same architecture by encouraging receipt requests and, where appropriate, the use of verifiable electronic payment methods that strengthen transaction evidence without making the system dependent on any single payment channel. Together, these elements make the taxable transaction visible through the fiscal record, the monetary event and consumer participation.

[1] European Commission (2025), "VAT Gap", Taxation and Customs Union, https://taxation-customs.ec.europa.eu/taxation/vat/fight-against-vat-fraud/vat-gap_en

1. The problem: fiscal control often starts after the transaction

In practical VAT administration, the moment that matters most for control is not the moment when a receipt is printed or a tax return is submitted, but the moment when a taxable exchange takes place. At that point, goods or services are supplied, consideration is paid or becomes payable, and taxable economic value enters the commercial flow. Many fiscalisation systems reach this moment only indirectly, through the later document or data object created from it. The control problem therefore sits in the gap between the economic transaction and the fiscal record that represents it.

This gap is especially important in final-consumer environments, where transaction volumes are high, individual sale values may be modest, and the buyer often has limited reason to preserve or challenge the receipt. The tax authority normally observes the transaction through the evidence that reaches the fiscal system, rather than through the economic exchange itself. Where the transaction is fully and accurately recorded, this evidence can support effective control. Where the transaction is omitted, under-recorded or disconnected from traceable settlement evidence, the fiscal chain begins too late or begins with incomplete evidence.

Local fiscal devices were introduced to address a genuine control problem by protecting the fiscal record after it has been created. Fiscal memories, certified cash registers, secure data modules, transaction numbering and digital signatures make the recorded sale harder to alter, delete or reconstruct after entry. This remains valuable in retail, hospitality and other final-consumer sectors, where high transaction volumes and dispersed sales locations create practical enforcement challenges. The limitation is that the control still begins with a recorded object. Once the sale enters the system, the device can protect it, but where the sale remains outside the system, the protected fiscal record never begins.

Online reporting improves this position by adding a central visibility layer above the local device. Its value is not limited to receiving the same data earlier or making recorded data harder to alter. It allows the fiscal document to be linked to a tax-authority record, unique real-time identifier, verification code or reporting response, which can show that the recorded economic event has entered the official fiscal chain. It also gives the authority earlier access to transaction patterns, instead of requiring it to wait until the end of the tax period or rely primarily on retrospective return analysis. For audit teams, online access can make on-premises inspections more efficient because the agent can compare local records, reported records and authority-held data during the review process.

The consumer-facing verification function of online reporting systems introduces another possible control channel. A QR code, verification code or online receipt-checking interface allows the buyer to confirm that a receipt has been reported, or that the visible receipt corresponds to a record known to the tax authority. In practice, this control channel remains weak where the consumer has little reason to check the receipt. Most buyers do not routinely scan QR codes or validate fiscal receipts after ordinary purchases unless the system gives them a clear incentive to do so. Consumer participation therefore usually underperforms, but it becomes materially stronger when receipt verification is linked to lotteries, rebates, rewards, expense claims or other practical benefits.

This also explains the limitation of control codes and receipt-verification features. Once the receipt leaves the business premises, it is only a paper of a claimed fiscal event unless it can be matched to a record held by the cash register, the reporting platform or the tax authority. A verification code can support this match, but it cannot by itself prove that every taxable sale was entered into the fiscal system. Its main value is to confirm that a specific issued receipt corresponds to reported data, support audit reconciliation and enable consumer-side checking. The weakness remains where a transaction is recorded only partially or is not recorded at all, because the code printed on a receipt has evidentiary value only when the corresponding original record can also be found in the fiscal system, the billing system or the tax authority's records.

The next policy question therefore follows naturally. Local devices protect the record after creation, and online reporting certifies, transmits and exposes the recorded document to earlier authority visibility, but both models still depend on the taxable transaction entering the fiscal chain. The stronger policy direction is a broader transaction-visibility architecture built around the fiscal record, the monetary event and the consumer's behaviour. In that architecture, the fiscal document remains the legally structured VAT record, electronic payment provides independent evidence of value transfer, and consumer incentives strengthen the likelihood that the buyer requests, retains and validates the fiscal document so that the taxable transaction is properly recorded and capable of verification.

2. Sales suppression: where the transaction becomes invisible

Sales suppression is the deliberate reduction of recorded taxable sales compared with real economic activity. It may occur before a sale is entered into the POS system, after recording through deletion or alteration, or through software-assisted methods such as Phantomware and Zappers. The OECD identifies these methods as specific electronic-sales-suppression techniques and treats them as a direct threat to tax revenues.[2]

The central issue is not only the manipulation of a fiscal device or POS application, but the point at which the transaction becomes invisible to the fiscal and accounting systems. Suppression may occur before the fiscal document is created, inside the POS or ECR environment, during transmission to the tax authority, or later during reconciliation when reported documents and settlement evidence do not match. Ainsworth's comparative analysis[3] of sales suppression reinforces this point by treating the retail stage of VAT and sales-tax systems as a key exposure area, because tax is collected from final consumers while documentation discipline may be weak.

This exposure also shows the practical limit of POS accreditation. In many fiscalisation regimes, accreditation is primarily a compliance test of prescribed fiscal functions, data formats and reporting behaviour. It is usually not a forensic analysis of the full POS environment or of every vulnerability

[2] OECD (2013), "Electronic Sales Suppression: A Threat to Tax Revenues", https://www.oecd.org/content/dam/oecd/en/publications/reports/2013/02/electronic-sales-suppression_f668c17b/f99b756d-en.pdf

[3] Ainsworth, R. T. (2016), "Sales Suppression: The International Dimension", American University Law Review, https://aulawreview.org/au_law_review/wp-content/uploads/2016/07/Ainsworth.pdf

through which sales could be suppressed. As a result, certification may confirm that recorded data can be stored or transmitted correctly without proving that every taxable transaction will necessarily be entered, preserved and reported.

The same limitation continues after deployment. A certified POS system may operate in a live business environment where configuration changes, hidden functions, parallel procedures or additional software are difficult to detect through ordinary reporting controls. In such cases, sales suppression may only become visible during a targeted audit, forensic inspection or detailed reconciliation exercise, each of which requires time, technical capacity and enforcement resources.

This explains why faster document reporting is valuable but incomplete. Online reporting gives the authority earlier access to recorded transactions, but sales suppression often attacks the transition from the real sale to the documented sale. The policy objective is therefore to reduce transaction invisibility at each suppression boundary, rather than relying only on the assumption that certified systems will always record every taxable sale.

Suppression boundary	How the transaction becomes exposed	Control response
Before recording	The sale takes place, while the fiscal document is omitted.	Consumer incentives, payment visibility and risk-based review of cash-heavy patterns.
Inside the POS or ECR	The sale is entered and later deleted, altered or concealed.	Certified ECR, secure storage, event logs and technical-control rules.
During reporting	The fiscal record exists locally, while transmission is delayed or incomplete.	Online reporting, protected queues, retry logic, exception monitoring and outage rules.
During reconciliation	Reported documents and settlement evidence show inconsistent patterns.	Payment-linked fiscal reporting, shared identifiers and risk analytics.

3. From local fiscal devices to online reporting: the first evolutionary step

Local fiscalisation was an appropriate response to an earlier control problem, where the main risk was the manipulation of the sales record after the transaction had entered the cash register or sales system. Certified ECRs, fiscal memories, fiscal printers and secure modules created a controlled local evidence environment, improved record integrity and gave tax auditors a stronger basis for later verification.

Online reporting represents the natural development of that model. Instead of leaving the protected fiscal record inside the taxpayer's device until inspection, receipt or transaction data is transmitted to the tax administration or made centrally accessible. The OECD describes Online Cash Registers as a mechanism that gives tax administrations timely and uncompromised access to original retail-sales information needed to support tax reporting, payment and verification.[4]

The Swedish certified Electronic Cash Register reform demonstrates the value of local source-record integrity. The reform applied to businesses carrying out business-to-consumer (B2C) transactions paid by cash or card, and Engström, Hagen, Khoshghadam and Schneider report an immediate increase of approximately 2.7% to 4.3% in reported revenue after the introduction of certified ECR requirements.[5] The Swedish case therefore shows that protecting the recorded sale can change taxpayer behaviour once the transaction has entered the controlled recording environment.

Hungary demonstrates the further value of central POS visibility. Its Online Cash Register (OCR) reform connected almost 200,000 OCRs used by approximately 100,000 enterprises, moving retail transaction data from isolated local devices towards the National Tax and Customs Administration. The MNB (Hungarian National Bank) study reported a 23.0% increase in reported turnover for small retail enterprises and a 35.1% increase for small accommodation and food-services enterprises after the introduction of OCRs.[6] The Hungarian case therefore shows that central reporting can produce strong sectoral effects where local-data isolation and first-recording exposure are material risks.

The lesson is evolutionary rather than technological uniformity. Sweden and Hungary did not implement the same model, but both reforms show that stronger visibility over recorded transactions can materially improve reported turnover. Local fiscal devices strengthen the integrity of the record after entry, while online reporting moves that record closer to the authority and reduces the isolation of taxpayer-held data. The next technology step should preserve these gains while addressing the earlier suppression boundary, where the real transaction may still fail to become a fiscal record.

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[4] OECD (2019), "Implementing Online Cash Registers: Benefits, Considerations and Guidance", https://www.oecd.org/content/dam/oecd/en/publications/reports/2019/03/implementing-online-cash-registers_8d53d1a6/bfd36ca2-en.pdf

[5] Engström, P., Hagen, J., Khoshghadam, N. and Schneider, J. (2024), "Effects of Electronic Cash Registers on Reported Revenue", International Tax and Public Finance, https://link.springer.com/article/10.1007/s10797-024-09844-x

[6] Lovics, G., Szőke, K., G. Tóth, E. and Ván, B. (2019), "The Effect of the Introduction of Online Cash Registers on Reported Turnover in Hungary", MNB Occasional Papers 137, https://www.mnb.hu/letoltes/mnb-op-137-final-1.pdf

Online reporting also brings practical constraints that must be designed into the reform from the outset. Real-time or near-real-time reporting depends not only on legal requirements and technical specifications, but also on infrastructure, connectivity and device-service reliability in real operating environments. This is particularly important in models such as the Hungarian Online Cash Register system, where transaction data is transmitted to the central fiscalisation system through a built-in mobile network interface. In practice, stable mobile coverage cannot be assumed equally across all business locations. A parking payment terminal installed in a garage, a seasonal hospitality business in a remote area, or an accommodation provider operating on the Great Hungarian Plain may face very different connectivity conditions from a retailer in an urban shopping centre. These operational differences can turn an otherwise strong legal and technical design into a fragile implementation if offline continuity is not properly addressed. A mature online model therefore requires protected offline recording, secure local queues, reliable timestamps, retry rules, outage reporting and exception monitoring, so that central visibility is maintained without making compliance dependent on uninterrupted network availability. This also creates an uncomfortable reminder of the Swedish-style local fiscalisation model, since whenever the network is unavailable and transactions are stored locally for later transmission, the online system is not fundamentally much more online than a certified offline device. Its advantage depends on the offline period being exceptional, controlled and followed by reliable subsequent reporting.

4. The remaining gap: document reporting still misses the monetary event

E-invoicing and continuous transaction controls extend the same basic logic from POS receipts to structured fiscal documents. They turn invoices into machine-readable records and allow invoice data to be transmitted to the tax authority or exchanged through controlled platforms. OECD Tax Administration 3.0 and Electronic Invoicing describes this movement from periodic reporting towards real-time reporting, where transactional data can be transmitted shortly after invoice issuance.[7]

Peru provides important evidence for the value of this structured-document layer. Bellon, Dabla-Norris, Khalid and Lima found that VAT e-invoicing increased reported firm sales, purchases and VAT liabilities by more than 5% in the first year after adoption. This shows that structured digital documents can improve declaration quality and expand VAT visibility in formal transaction chains.[8]

Despite these improvements, a fundamental structural gap remains, already observed in POS fiscalisation. Document reporting, even when real-time and structured, originates from the document itself and depends on the transaction entering the seller's reporting process. By contrast, the monetary event is not created through documentation or internal recording but through the movement of funds,

[7] OECD (2022), "Tax Administration 3.0 and Electronic Invoicing", https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/09/tax-administration-3-0-and-electronic-invoicing_59ac73c5/2ffc88ed-en.pdf

[8] Bellon, M., Dabla-Norris, E., Khalid, S. and Lima, F. (2022), "Digitalization to Improve Tax Compliance: Evidence from VAT e-Invoicing in Peru", Journal of Public Economics, https://www.sciencedirect.com/science/article/pii/S0047272722000639

providing direct and independent evidence of settlement and supporting the conclusion that a taxable exchange has occurred. In electronic-payment environments, this settlement trace is generated through channels external to the seller's reporting system, positioning payment-linked transaction visibility as a potential next step in the evolution of fiscalisation.

Accordingly, the focus may shift from reinforcing document control through online reporting and protected local storage towards stronger transaction visibility. The fiscal document explains the VAT treatment, while the payment trace provides corroborating evidence of settlement and the underlying monetary event. When these elements are linked, the transaction becomes visible through both documentation and tangible financial evidence, creating evidentiary redundancy between the fiscal record and the settlement trace. This reduces exposure to suppression, as visibility no longer depends solely on the seller's recording practices or intent.

5. Payment-linked fiscalisation and settlement evidence

Payment-linked fiscalisation should be understood as an evidentiary extension of document-based control, not as a replacement for fiscal documents or POS-based reporting. Its relevance is not the payment method used in the transaction, but whether the fiscal record's settlement claim can be supported by independent or separately verifiable evidence that the consideration was actually paid, transferred, redeemed, offset or otherwise settled. This can reduce exclusive reliance on seller-originated records while preserving the role of the POS, invoicing or fiscalisation system as the source of VAT content. OECD Tax Administration 2024[9] reflects a related direction in its discussion of virtual fiscalisation for cash registers and other points of sale, including services that enable the automatic transfer of receipt data, such as receipt amount, VAT rates and VAT amount, from cash registers or other means of payment to the tax authority.

In practical terms, this model enables a minimum VAT-relevant fiscal payload to be linked to the payment flow at the level of the payment terminal, payment gateway or payment service provider, which creates a structured relationship between document-based reporting and payment-based evidence. While the fiscal document remains the carrier of VAT treatment, and the payment trace functions as a verification layer that confirms settlement, the tax authority can compare reported transaction data with settlement evidence without requiring the payment channel to replicate the full tax logic of the transaction. The relevant policy issue is therefore not the payment method itself, but whether the fiscal record can be supported by independently or separately verifiable evidence that the consideration was actually settled.

The effectiveness of this model depends on the surrounding payment landscape. Where electronic payments dominate, payment-based visibility can assume a more central role, simplifying transaction capture and supporting integrated consumer flows that combine payment, receipt and possible

[9] OECD (2024), "Tax Administration 2024: Comparative Information on OECD and Other Advanced and Emerging Economies", virtual fiscalisation discussion, https://www.oecd.org/en/publications/tax-administration-2024_2d5fba9c-en/full-report/component-12.html

incentives. This can improve administrative efficiency while strengthening the evidentiary basis of VAT control. The broader policy rationale is reinforced by the cost of physical cash, as producing, transporting, securing, distributing, processing and recirculating cash imposes material costs on the public sector, financial institutions and the wider economy. The European Payments Council notes that cash is often perceived as free, even though its distribution and handling all require resources.[10]

However, this structure does not generalise uniformly. The continued prevalence of tangible cash constrains the extent to which visibility can be shifted towards the monetary event. In cash-intensive environments, POS or invoicing systems remain the primary source of transaction data, and abrupt restrictions on cash usage introduced to improve VAT visibility could disrupt ordinary commercial behaviour. The OECD's work on safeguarding access to cash in the digital economy supports a balanced transition approach, recognising the benefits of digital payments while treating access to cash as an ongoing policy issue.[11]

Similarly, transactions involving complex VAT treatment require tax determination to remain within systems that manage product-level and contextual information, which payment infrastructure does not natively provide. Mixed VAT rates, discounts, vouchers, deposits, tips, partial payments, refunds, account sales and B2B buyer information require fiscal logic that resides in the POS, invoicing or fiscal system. This is particularly relevant in jurisdictions where fiscalisation extends beyond transaction totals into detailed product-level or item-level reporting. Russia, Fiji, Serbia and Vanuatu illustrate that some fiscalisation environments require richer product-level reporting structures. In such environments, any payment or settlement evidence would have to remain a supporting verification layer, while the POS and sales systems continue to provide the authoritative source of product, tax and transaction detail.

Settlement evidence should also not create false comfort. Evidence that consideration was settled does not prove that the fiscal record contains the correct VAT treatment, item-level content, tax rate, exemption, discount, refund or correction status. A single settlement may relate to more than one fiscal record, and a single fiscal record may be settled through more than one settlement event. For this reason, settlement evidence should support verification and reconciliation, not replace fiscal logic or audit judgement.

Payment-linked fiscalisation should therefore be understood as a complementary control model whose role varies by transaction environment. In simple, electronic-payment-heavy contexts, the payment channel can function as a practical gateway for transaction visibility. In mixed or complex environments, it operates alongside document-based reporting, providing a verification layer rather than a replacement, while retaining the potential to assume a more central role as a country's electronic-payment maturity evolves.

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[10] European Payments Council (2013), "Improving the Efficiency of the Handling of Cash - Cash Cycle Models", https://www.europeanpaymentscouncil.eu/sites/default/files/KB/files/EPC037-13%20Improving%20the%20Efficiency%20of%20the%20Handling%20of%20Cash%20-%20Cash%20Cycle%20Models.pdf

[11] OECD (2025), "Safeguarding Consumers' Access to Cash in the Digital Economy", https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/safeguarding-consumers-access-to-cash-in-the-digital-economy_d6048c25/189970b4-en.pdf

The transition towards this model is conditional rather than absolute. It depends on payment behaviour, VAT complexity and system architecture, and must be supported by gradual shifts in consumer and merchant practices. Incentive structures and usability improvements can facilitate this transition by making electronic payment more attractive through benefit, convenience and trust. At the same time, the coexistence of cash and electronic payments means that multi-layered visibility, combining document-based reporting, settlement evidence and verification mechanisms, will remain necessary in the medium term.

6. Consumer incentives: making the buyer part of transaction visibility

Consumer incentives address transaction visibility at the point where document-based control is inherently weakest, before the receipt is requested, issued or verified. In a typical final-consumer transaction, the buyer receives the product or service regardless of whether a compliant fiscal document is issued. As a result, the consumer often has no immediate reason to request, verify or retain the receipt. Incentive mechanisms alter this dynamic by assigning value to the fiscal document and thereby incorporating the buyer into the transaction-visibility process.

In document-based fiscalisation, incentives encourage the active request or validation of receipts. Instruments such as lottery participation, rebates, warranty extensions, tax credits or digitally verifiable proof of purchase create a direct benefit for the consumer. As noted in European Commission analysis[12] of receipt-lottery schemes, such mechanisms increase the likelihood that consumers request receipts, thereby supporting the inclusion of B2C transactions in the formal economy.

Empirical evidence confirms the effectiveness of this approach while also highlighting its limits. São Paulo's Nota Fiscal Paulista programme demonstrates how consumer participation can translate into measurable compliance gains. Naritomi's analysis[13] finds that tax revenue net of rewards increased by 9.3 percent, illustrating that when receipts carry value, consumers can function as consumer-side control actors. The critical point is behavioural, because the buyer's request introduces pressure precisely at the stage where the seller might otherwise leave the transaction undocumented.

Evidence from Tanzania reinforces both the strength and the boundary of this mechanism. Buluba shows[14] that customer incentives increase receipt requests and consumer awareness in final-consumer transactions, addressing the point at which the self-enforcing nature of VAT weakens. At the same time, the response of firms indicates that this pressure does not fully eliminate sales-suppression risk. Some firms adjust behaviour by reducing voluntary receipt issuance or shifting

[12] Fooken, J., Hemmelgarn, T. and Herrmann, B. (2015), "Improving VAT Compliance, Random Awards for Tax Compliance", European Commission Taxation Papers, Working Paper No. 51, https://taxation-customs.ec.europa.eu/system/files/2016-09/taxation_paper_51.pdf

[13] Naritomi, J. (2019), "Consumers as Tax Auditors", American Economic Review, 109(9), 3031-3072, https://www.aeaweb.org/articles?id=10.1257%2Faer.20160658

[14] Buluba, K. (2025), "Improving VAT Compliance by Incentivizing Customers: Evidence from Tanzania", Chr. Michelsen Institute, https://www.cmi.no/publications/9576-improving-vat-compliance-by-incentivizing-customers-evidence-from-tanzania

towards informal receipts, demonstrating that receipt-based incentives strengthen documentation but do not ensure that reported values, item-level content or VAT treatment fully correspond to the underlying transaction.

This limitation reflects the underlying design of receipt-based incentives. Their primary function is to motivate the existence and use of a valid fiscal receipt, rather than to ensure comprehensive verification of transaction content. A receipt may therefore be sufficient for participation in consumer incentives while still allowing scope for incomplete or understated reporting.

Payment-linked incentives address this limitation by extending consumer influence beyond documentation to the choice of payment method. When consumers receive a visible benefit for choosing electronic payment, they are more likely to select a method that generates an independent settlement trace. Wan's analysis[15] highlights that cashless payment systems can perform a similar compliance function to receipt lotteries by helping to curb tax evasion. The consumer then supports transaction visibility in two complementary ways, by encouraging documentation through the receipt and by contributing to the creation of independent settlement evidence.

In this model, consumer incentives are no longer limited to encouraging the buyer to request a simple document. They also align documentation behaviour with payment behaviour, so that the transaction becomes visible through both the fiscal record and the payment trace. Consumer incentives therefore remain relevant in document-based fiscalisation but become structurally more effective when integrated with payment-linked transaction visibility.

7. Country evidence and what it proves

The relevant country evidence is strongest where payment infrastructure already interacts with fiscalisation, or where payment incentives show both the promise and the limits of electronic settlement as a VAT-compliance tool. These cases show that payment-linked fiscalisation is already emerging in different forms, including reduced reliance on printed fiscal receipts, mandatory POS-payment interconnection, digital receipt ecosystems and electronic-payment incentives. The common lesson is that settlement evidence can strengthen transaction visibility, but its value for VAT compliance depends on how it is connected to reporting, verification and audit processes.

Romania provides an example of reduced reliance on printed fiscal receipts in card-payment environments. ANAF guidance distinguishes between cash and card payments by treating the fiscal receipt as the mandatory document evidencing cash transactions, while allowing a different documentary treatment for card-payments. In this environment, economic operators are not legally required to print or hand over the fiscal receipt unless the customer expressly requests it, and ANAF also clarifies that the bank account statement can serve as proof of purchase for evidentiary purposes

[15] Wan, Junmin, 2021. "The lottery receipt," International Review of Economics & Finance, Elsevier, vol. 71(C), pages 733-750., https://ideas.repec.org/a/eee/reveco/v71y2021icp733-750.html

where no printed fiscal receipt is issued.[16] The Romanian case therefore shows that electronic payment can carry practical evidentiary weight and reduce dependence on paper-based proof while preserving the fiscal relevance of the transaction record.

Greece provides a more direct example of payment-linked fiscalisation through the mandatory interconnection of Fiscal Electronic Mechanisms with EftPOS terminals. The AADE framework establishes technical and procedural requirements so that card-payment transactions are linked with fiscal transaction issuance and tax monitoring. The framework aims to ensure that card payments are accompanied by the issuance of fiscal transactions, thereby supporting effective tax monitoring and reducing tax evasion.[17] Greece therefore shows how payment terminals can become operationally connected to fiscalisation, closing part of the gap between card settlement and fiscal recording.

Taiwan illustrates a broader consumer-facing digital fiscal-receipt ecosystem in which electronic fiscal receipts, carriers, payment instruments and prize mechanisms operate as part of a connected digital habit. The Ministry of Finance system allows cloud invoices to be stored on carriers such as mobile barcode, EasyCard, iPASS, iCash, membership cards and credit cards, while prize notifications and automatic bank-account payment can be made available where the consumer has set up the relevant carrier and account arrangements.[18] Taiwan therefore shows how fiscal receipts, consumer incentives, payment instruments and digital-service habits can reinforce one another when embedded in a wider consumer-facing fiscal ecosystem.

Uruguay provides the necessary counterexample because it shows that electronic-payment incentives can change consumer behaviour without automatically improving VAT compliance. The financial inclusion reform offered VAT rebates for credit-card and debit-card payments, making electronic payment more attractive to consumers, and Brockmeyer and Sáenz Somarriba find that these incentives triggered an immediate 50 percent increase in the number of card transactions.[19] However, the expected compliance effect did not follow. The increase occurred mainly among firms that already had card machines, while tax compliance was unaffected. One possible structural explanation is that the consumer-side incentive was not matched by a universal merchant-side obligation to accept electronic payment. Uruguay's Law 19.210, Article 65[20] allowed merchants to choose whether to accept debit or credit cards, rather than establishing a general requirement that all retailers provide electronic-payment acceptance. The lesson is that electronic-payment incentives are more likely to

[16] Romania, Legea nr. 317/2024 pentru modificarea şi completarea Ordonanţei de urgenţă a Guvernului nr. 28/1999 privind obligaţia operatorilor economici de a utiliza aparate de marcat electronice fiscale, published in Monitorul Oficial nr. 1308, 23 December 2024., https://legislatie.just.ro/Public/DetaliiDocument/292952?isFormaDeBaza=True&rep=True

[17] Independent Authority for Public Revenue, Greece, "Protocol V1.08 for the interconnection of Fiscal Electronic Mechanisms with EFT/POS terminals", Decision A.1088/19.06.2023., https://www.aade.gr/sites/default/files/2024-03/A_1088_19_06_2023%20Protocol%20V1.08_ENGLISH.pdf

[18] Ministry of Finance, Taiwan, "Cloud Invoice and e-Invoice Services", https://www.mof.gov.tw/eng/singlehtml/f48d641f159a4866b1d31c0916fbcc71?cntId=5af75adf6da748d5a483c426ef239685

[19] Brockmeyer, A. and Sáenz Somarriba, M., "Electronic Payment Technology and Tax Compliance, Evidence from Uruguay's Financial Inclusion Reform", American Economic Journal: Economic Policy, 2025, Vol. 17, No. 1, pp. 242–272., https://www.aeaweb.org/articles?id=10.1257%2Fpol.20220434

[20] Ley N° 19.210, Inclusión financiera, https://www.impo.com.uy/bases/leyes/19210-2014

support VAT visibility when the legal and operational environment ensures broad merchant acceptance and when the resulting settlement evidence can operate alongside the fiscalisation record.

Taken together, these cases show that payment-linked fiscalisation has policy value only when settlement evidence is given a defined role within the fiscal-control architecture. Romania and Greece show that payment infrastructure can already change the treatment or operation of fiscal receipts, either by reducing reliance on printed evidence or by linking card acceptance to fiscal transaction issuance. Taiwan shows that this logic becomes stronger when fiscal receipts, consumer incentives and digital payment habits are embedded in a wider consumer-facing ecosystem. Uruguay, however, shows that consumer-side payment incentives have limited VAT-compliance effect where broad merchant acceptance is not sufficiently ensured and where settlement evidence operates only in parallel with, rather than in support of, the fiscalisation record.

8. Policy Pathway Options for Transition

The policy question is not simply how to replace cash with electronic payment, or how to add another reporting channel to existing fiscalisation systems. The real question is how a government can move from a cash-heavy and document-centred control environment towards stronger transaction visibility in a way that is legally sound, operationally realistic, politically acceptable and fiscally useful. There is no single universal reform path for this transition. The appropriate pathway depends on the country's payment habits, fiscalisation maturity, legal framework, taxpayer structure, administrative capacity and political constraints. For that reason, the following pathway should be read as a recommended policy-design route rather than as a fixed reform sequence. It reflects the conditions that are normally relevant when assessing whether payment-linked fiscalisation can be introduced in a credible and proportionate way.

A useful policy pathway begins with diagnostic clarity. Before selecting the reform route, the government needs to identify the point at which transaction visibility is lost. This weakness may arise before the fiscal record exists, where sales do not enter the POS or fiscal system at all, or after the record is created, where it remains locally controlled, weakly reported or difficult to reconcile with external evidence. In more advanced environments, fiscal documents may already be reported online, while the monetary event remains outside the fiscal-control architecture. A reform built only around electronic-payment adoption may therefore fail if the real weakness lies elsewhere, including in merchant acceptance, weak fiscal-record linkage, insufficient use of settlement evidence in audit or limited consumer participation.

A credible pathway also depends on a legal foundation that supports electronic-payment availability without creating an abrupt restriction on cash. Uruguay's experience shows that consumer-side payment incentives can increase card use without automatically improving VAT compliance where the merchant-side environment does not ensure sufficiently broad electronic-payment acceptance. Romania and Greece point towards a stronger approach. Romania shows that card-payment environments can justify reduced reliance on printed fiscal receipts, while Greece shows that payment terminals can be connected directly to fiscal transaction issuance. The policy lesson is that payment-

linked fiscalisation requires more than encouraging consumers to pay electronically. It also requires a legal and operational framework that enables electronic payment to be accepted, recorded and connected to the fiscal process.

In most cases, the transition is better treated as a staged reform rather than introduced as a single universal measure. A practical pathway would normally begin by stabilising the existing fiscal base through reliable online reporting, digital receipt capability, taxpayer registration, device or system identification, outage rules, audit access and data retention obligations. The next phase would introduce payment-side readiness, including electronic-payment acceptance rules, payment-terminal registration, payment service provider cooperation, technical standards and consumer-facing digital receipt options. Only after these conditions are in place does it become realistic to link fiscal records and payment traces in selected low-complexity B2C environments, where electronic payment is already common and the payment terminal can operate as a narrower and more standardised control point.

Incentives need to be used strategically. Receipt lotteries, rebates, tax credits and digital proof-of-purchase benefits can influence consumer behaviour, but they do not all address the same weakness. Receipt-based incentives encourage the buyer to request or validate the fiscal document, while payment-based incentives encourage the buyer to choose a payment method that creates an independent settlement trace. The strongest design connects these behaviours, so that the consumer supports both evidence layers, the fiscal record and the payment trace.

The audit model also needs to evolve by making settlement evidence an active component of risk assessment. The tax authority should be able to compare fiscal records, settlement traces, taxpayer profiles, sector benchmarks and cash-intensity patterns within a risk-based compliance framework. Cash should remain a legitimate form of settlement, and limited settlement evidence should not be treated as evidence of non-compliance on its own. It can, however, become a visibility indicator where it is unusual for the sector, location or business model, or where it appears inconsistent with reported turnover, receipt patterns or other third-party evidence. This allows audit resources to be concentrated where the fiscal record relies most heavily on seller-created data and where independent or separately verifiable settlement evidence is weakest.

Proportionality is equally important. Payment-linked fiscalisation is best understood as a complementary control layer rather than a universal replacement for POS-based fiscalisation. A payment terminal should not be expected to carry complex VAT logic, product-level reporting, mixed rates, discounts, refunds, vouchers, deposits, B2B buyer details or correction scenarios in the same way as a POS, invoicing or fiscal system. Its policy value is different. In simple electronic-payment-heavy environments, the payment terminal can provide a lower-friction gateway for transaction visibility because it is narrower in scope, more standardised in operation and easier to deploy at scale than a full POS or fiscal-device model.

The recommended pathway is therefore staged, but not mechanically fixed. A practical reform would normally begin by stabilising document-based fiscalisation, then strengthening electronic-payment availability, then introducing incentives that favour traceable payment, and only then expanding payment-linked transaction visibility into sectors where the model can operate reliably. This pathway

preserves the fiscal document as the carrier of VAT treatment while adding the payment trace as an independent evidence layer. It reduces suppression exposure by making the transaction visible through more than one channel, while avoiding the political and operational risks of an abrupt move away from cash.

The policy conclusion is clear. A credible transition towards payment-linked fiscalisation requires legal design, technical architecture, market-readiness assessment, consumer-behaviour strategy, taxpayer segmentation, audit integration and implementation governance. The reform is a fiscal-control programme that must be designed around the country's payment habits, infrastructure maturity, VAT complexity, administrative capacity and political constraints. Where these elements are aligned, payment-linked fiscalisation can move VAT control closer to the monetary event and create a more resilient transaction-visibility framework.

Policy pathway	Policy purpose	Design condition
Diagnostic pathway	Identify where transaction visibility is lost, whether before recording, during reporting, at settlement or during audit reconciliation.	The reform should address the actual suppression boundary rather than a preferred technology model.
Legal-readiness pathway	Establish the legal basis for electronic-payment acceptance, payment-terminal use, digital receipts and fiscal-record linkage.	Consumer incentives require clear and enforceable merchant-side acceptance and operating obligations.
Fiscal-system modernisation pathway	Stabilise online reporting, digital receipts, outage rules, audit access and data retention before settlement evidence is added to the control framework.	Payment-linked fiscalisation is stronger where the fiscal record is reliable, linkable and capable of reconciliation.
Incentive pathway	Encourage consumers to request fiscal documents and choose traceable payment methods.	Incentives should connect receipt behaviour with payment behaviour rather than treating them as separate compliance tools.
Risk-based audit pathway	Use settlement evidence, cash intensity, fiscal records and sector patterns in compliance-risk assessment.	Settlement evidence should support reconciliation, anomaly detection and audit selection.
Sectoral implementation pathway	Introduce payment-linked models first in simple, electronic-payment-heavy B2C environments.	Payment terminals are most suitable where VAT logic is simple, product-level reporting is limited and electronic-payment use is mature.

9. A possible next design step

A further design question follows from the separation between fiscal reporting and settlement evidence. In most current models, the POS, invoicing or fiscalisation system creates and reports the fiscal record, while settlement evidence is created or retained separately. This separation is functionally appropriate, but it also means that the link between the fiscal record and settlement evidence often has to be created, preserved and reconciled after the fact.

Some jurisdictions are already narrowing this gap. Greece requires the interconnection of cash register systems and EFT/POS terminals[21], while Italy has introduced a POS–RT connection[22] based on a logical link between electronic payment instruments and fiscal recording systems.

Uruguay adds a different lesson. Its VAT rebates and other consumer incentives[23] encouraged card and electronic-money payments, but the available empirical evidence[24] suggests that higher electronic-payment use does not necessarily improve tax compliance where settlement evidence is not structurally connected to fiscal reporting, reconciliation or audit use.

These examples do not create a universal model, but they show that the boundary between fiscal reporting and settlement evidence is already a policy and implementation issue.

A possible future direction is therefore a more coordinated fiscal-settlement evidence flow. In such a model, the fiscal system would remain responsible for the VAT content of the transaction, while the settlement-evidence layer would support the fact that consideration was actually settled. The policy objective would be to keep these responsibilities distinct while reducing the distance between fiscal reporting and settlement evidence, supported by structured cross-references between the relevant fiscal and settlement records.

This model is not limited to simple transactions. More complex cases may also involve settlement evidence, including advance payments, bank transfers, credits or other forms of value settlement. The key distinction is that settlement evidence supports the fact that value was paid, transferred, redeemed, offset or reversed, while VAT treatment and transaction classification remain within the fiscal or invoicing layer. Coordinated fiscal-settlement evidence flows should therefore be treated as a targeted design option supporting POS-based fiscalisation or e-invoicing, rather than as a general replacement for them.

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[21] Independent Authority for Public Revenue, Greece, “Interconnection of POS - Cash Systems”, AADE, https://www.aade.gr/en/diasyndesipos

[22] Agenzia delle Entrate, “POS-RT connection”, https://www.agenziaentrate.gov.it/portale/collegamento-pos-rt

[23] PwC, “Uruguay, Corporate - Other taxes”, Worldwide Tax Summaries, noting VAT reductions under Law No. 19,210 for final-consumer transactions paid through debit cards or electronic money instruments, https://taxsummaries.pwc.com/uruguay/corporate/other-taxes

[24] Brockmeyer, A. and Sáenz Somarriba, M., “Electronic Payment Technology and Tax Compliance, Evidence from Uruguay’s Financial Inclusion Reform”, American Economic Journal: Economic Policy, 2025, Vol. 17, No. 1, pp. 242–272., https://www.aeaweb.org/articles?id=10.1257/pol.20220434

10. Conclusion

The case for moving beyond older fiscalisation technologies is not based on the failure of earlier models. Local fiscal devices solved an earlier control problem by protecting the sales record after its creation, and online reporting addressed the next stage by moving recorded fiscal data closer to the tax authority. The remaining exposure sits at the earlier boundary, where the economic transaction becomes, or fails to become, a fiscal record.

The central weakness is the distance between the taxable economic event and the evidence available to the tax authority. VAT is charged on taxable transactions, while many control systems still depend primarily on seller-originated records to prove that those transactions occurred. Where the sale is omitted, under-recorded or disconnected from settlement evidence, the fiscal chain starts too late or rests on incomplete evidence.

Settlement-linked fiscalisation can therefore be seen as a potential next evolutionary step in VAT control design. It moves visibility closer to the monetary event while preserving the legal role of the fiscal document. The fiscal document remains the structured VAT record, carrying the tax content of the sale, while the electronic settlement trace adds a separate evidence layer showing that value moved through a settlement channel outside the seller's own reporting system.

This model is strongest when used proportionately. Payment or settlement infrastructure does not carry the full tax logic required for complex VAT treatment, product-level reporting, mixed rates, refunds, vouchers, deposits, buyer information or correction scenarios. Its value lies in adding independent settlement evidence to the fiscal-control architecture, either as a verification layer alongside document-based reporting or as a lower-friction visibility gateway in simple, electronic-payment-heavy B2C environments.

Consumer incentives strengthen the same architecture. Receipt-based incentives encourage the buyer to request, retain or validate the fiscal document, while payment-based incentives encourage the use of settlement methods that create an independent evidence trace. The most coherent design links these behaviours, making the transaction visible through the fiscal record, the monetary event and the consumer's participation.

The transition remains politically and operationally sensitive where cash is embedded in daily commercial behaviour. A balanced reform strategy should make electronic settlement methods more attractive through convenience, trust, incentives and practical usability, while allowing consumers and merchants time to adapt.

The direction of travel is therefore clear, even if the exact reform route remains country specific. Fiscalisation can evolve from the local protection of records, through the online reporting of documents, towards settlement-linked transaction visibility. A future-oriented fiscal-control system should preserve the VAT content of the fiscal document, retain POS and invoicing functionality where transaction complexity requires it, and use electronic settlement evidence, consumer incentives and risk-based analytics to make the taxable transaction visible at the point where it can otherwise disappear.

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